

THE NEW MIXING BOOK.



LOFTUS LONDON.

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LOFTUS'S NEW
MIXING AND REDUCING BOOK,

FOR THE USE OF

PUBLICANS AND SPIRIT DEALERS

AND

RETAILERS IN GENERAL.

LONDON:

PUBLISHED BY WILLIAM R. LOFTUS,
146, OXFORD STREET, W.;

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PREFACE.

No work of any originality or degree of usefulness in the mixing and management of spirits having issued from the press for the last fifty years, this treatise has been prepared with a view to supply, as far as possible, what must be felt to be a great want by publicans and others in the retail spirit trade. The receipts given in the old books have long been quite inapplicable to the requirements of modern business. Even the mode of denoting the strength of spirits is so different, that a trader of the present day would not

be able, without special study of the subject, to understand what was meant by the terms formerly employed. Such an expression as "two in five overproof" would now be unintelligible. And not only is the system of strengths obsolete; the character of the compounded liquors themselves is changed. The gin and the "ratafia" of our forefathers are unknown to us except by name. The taste of the public demands an article very dissimilar in flavour and composition to that which once pleased it. Purity and wholesomeness have come to be regarded as of *high* importance in all beverages; and although coarse and injurious stuff is still consumed in many quarters, the general quality of spirituous drinks is greatly improved. The nauseous and hurtful drugs that used to be added to the contents of the still would not be now tolerated. Simplicity, mildness, and

cleanness on the palate, are looked for and appreciated, where in the olden time a medley of strong, confused flavours, and a fiery smack, would alone have been relished. This alteration of the public taste necessitates the exercise of much greater care and skill on the part of purveyors. Mixing and reducing must now be conducted on rational principles, and with a judicious selection and proportioning of ingredients, if success in business be desired. Nothing must be left to chance or guess-work. That indispensable adjunct and infallible guide, the hydrometer, must be in continual use lest the mark should be overshoot by too much watering, and the customer be disgusted; or, lest a fair available margin of profit be lost by too sparing a hand. A good trustworthy receipt book is also essential, one in which every process has been well tested and found correct before it is inserted for the guidance of

readers; one in which no quackery or absurd misleading directions obtain a place; a plain, truthful manual; in short, containing only the information that is likely to be wanted, and adapted for easy reference on all occasions.

In the present publication these requisites are sought to be combined, and as such it is confidently offered to the patronage of the retail spirit trade.

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THE PUBLICAN'S NEW MIXING AND REDUCING BOOK.

CHAPTER I.

INTRODUCTORY OBSERVATIONS.

THE proper mixing or compounding of spirits is an art, although by no means an art difficult to learn or to practise. But it is of the utmost importance to bear in mind, that no success can be hoped for in it, *except as a rare and accidental thing*, by proceeding at random or by haphazard, regardless of rules and system. In other words, the desired effect, uniformity of strength and flavour, is only to be ensured by a strict compliance on all occasions with the directions of those who have made a special study of the subject and are qualified to act as guides to inexperienced hands. Guess-work

in every trade or business is a poor resource, and invariably leads sooner or later to failure, loss, and vexation. But in dealing with an article so costly and delicate as spirits, where a very slight difference in the usual strength or flavour causes a falling-off in custom, guess-work is simply madness, a wilful shipwreck of money and character. The knowledge of a few essential facts and attention to a few plain rules suffice to keep every man safe. An hour's reading will impart the requisite knowledge; and a minute's reflection will show the importance of acting by rule, and neglecting no detail, however trifling it may seem, of the prescribed process.

Mixing, as a trade term, is used to designate generally the preparation or making up of the various classes of spirits for sale by retail. Spirits as they are received by the publican from the distiller or rectifier in this country, or from the importer or the Customs' bond, if consisting of Brandy, Rum, or Geneva, require to be brought to a certain selling strength by the addition of water, and in some cases, to be flavoured or sweetened, before they will be acceptable to the public, or yield a fair profit to the trader. The operation of *mixing*, as it is

called, comprehends all the steps necessary for effecting this object; that is, the reducing, flavouring, and sweetening just mentioned.

Compounding is a term reserved specially for the business of the licensed rectifier or compounder, and is applied to the manufacture of flavoured spirits on the large scale. A publican, unless he holds a separate licence as a compounder, cannot legally prepare any article *which goes by the name of compounds*,* but if he avoid this, he may *mix* his spirits in any manner and to any extent he pleases.

According to law and the regulations of the Excise, a dealer in or retailer of spirits is allowed to mix sugar, the juice of fruits, or essential oils, with plain British spirits, or with foreign spirits. Such traders may in this way prepare such liquors as currant, raspberry, or cherry whiskey, &c., but the spirits must not be called "British Brandy," "Geneva," or "Rum," these terms being used expressly to denote compounds the making of which is the peculiar business of the compounder, and

* Compounds of all kinds are designated by the character X in Excise permits and certificates.

requires a separate licence. Dealers and retailers are also at liberty to prepare rum-shrub, and may have juice of fruit, to which has been added spirits, not exceeding the proportion of five per cent. of the juice.*

Blending is the name given exclusively to the operation of mixing together different qualities or "makes" of whiskey or brandy, &c., with the object of obtaining a spirit of soft and agreeable flavour, in which the harshness or fieriness of one kind is corrected or neutralized by the mildness and mellowness of another sample. A palatable and saleable spirit may thus be formed by skilful blenders from materials which singly would possess but little market value. Teas and wines are mixed with great advantage on the same principle. Blending is usually performed on the large scale by proprietors of spirits in duty-free bonded warehouses, the

* The regulations above cited are rarely enforced now-a-days by the Excise, it not being the practice of officers to take any notice of what retailers may do to their spirits, so long as there is no gross violation of the law for the protection of persons who carry on the business of compounders, and take out a special licence accordingly. For an abstract of the laws generally relating to the spirit trade, see "Loftus's Legal Handbook," price 1s.

process being one which it is evident from its nature cannot be fitly undertaken by a retailer.

Reducing simply means lowering the strength with water or weaker spirits to any desired point. In most cases of mixing there is an unavoidable reduction of strength, but it is only where the intention or professed object is merely to alter the strength that the term *reducing* is employed.

Of course, in actual business the terms above defined are often used indiscriminately the one for the other, and without any great confusion or mistake resulting, as it is generally well understood what is required to be done, although the process may not be correctly named. Still, it is advisable that every person should both know and at all times apply the right expressions.

Proof Spirit.—The first and most essential piece of information to acquire with respect to spirits in general is the meaning of the term Proof Spirit, and the mode of estimating degrees of strength according to this standard.

Exceedingly vague and erroneous notions prevail on the subject of proof. Some believe it to be nearly as strong as spirits of wine;

others think it identical with alcohol itself in its purest form ; while others again rank it as about equivalent to the ordinary selling strength of publicans' rum or brandy.

The simple fact is, that the revenue calls by the name of Proof Spirit any spirit which weighs twelve-thirteenths of the weight of an equal bulk of water at the same temperature. A gallon of rain-water at the temperature of 62° Fahrenheit weighs exactly 10 lbs. Now if a gallon measure filled with a certain spirit at this temperature weighs 9 lbs., and 2-10ths of a pound, that spirit is said to be of proof strength. It is of course understood that the spirit in question consists substantially of no other ingredients than spirit and water. If sugar or other solid matter, or any liquid heavier than water be present, this method of determining the relation of the strength to proof cannot be employed.

In scientific language proof spirit is said to be of the specific gravity 0.920, referred to water as 1 ; that is, where water weighs 1 or 10 or 100, &c., proof spirit weighs 0.920, 9.20, 92, &c.

All spirituous liquors, consisting, as above mentioned, of spirit and water only,—the small

amount of natural or added flavouring matter in such spirits as whiskey, rum, brandy, unsweetened gin, &c., not having any effect worth consideration,—are valued as regards their strength, that is, the greater or less proportion of absolute spirit they contain, by this standard of proof, such relation being expressed in degrees or *per cents*. (hundredth parts) over and under proof respectively. Every spirit stronger than the standard is said to be so many degrees per cent. Over Proof, or O. P.; while every spirit weaker than the standard is said to be so many degrees per cent. Under Proof, or U. P. It may in fact be considered that the proof point lies about midway between very strong spirits of wine and water.

Now, the practical interpretation to be put upon any expression of strength in degrees O. P. or U. P. is as follows:—

When a sample of spirits is found by the hydrometer and strength tables to be, suppose, 20 per cent. O. P., it is to be understood that every 100 gallons of that spirit will require the addition of 20 gallons of water, or that every gallon will require 2-10ths of a gallon of water, to reduce the strength to that of proof.

On the other hand, when a spirit is declared to be of the strength, say 20 per cent. U.P., what is implied is, that in every 100 gallons there are only 80 of the strength of proof.

Thus, 100 gallons of spirit, at 20 per cent. *over* proof, are equivalent to 120 gallons of proof spirit.

100 gallons at 20 per cent. *under* proof are equivalent to only 80 gallons of proof spirit.

It is easy to see that, in order to find the quantity of water requisite for reducing any given number of gallons of spirits either to proof or from any one strength to any other over or under proof, we have only to make use of the proportions above stated, the general rule applicable to all possible cases being—

1. *Add degrees over proof to 100, and subtract degrees under proof from 100.* 2. *Then multiply the number so obtained for the given rate per cent. by the quantity of spirits, and divide by the number for the required rate per cent.* 3. *The difference between this result and the given quantity of spirits shows the water to be added.*

EXAMPLE 1.—How much water is necessary to reduce 345 gallons of spirits at proof to 65 per cent. under proof?

Number for given strength (proof), 100.

Number for required strength (65 per cent. U. P.), 35.

Then by the rule.. .. 345
100

And .. 985·7 35 $\overline{)34,500}$ (985·7 galls.

Orig. quan. 345·

640·7 gallons of water required.

EXAMPLE 2.—What water must be added to reduce 76 gallons of rum at 34·8 per cent. O. P. to 12 per cent. U. P.?

Number for given strength (34·8 O. P.), 134·8.

Number for required strength, (12 U. P.), 88.

By the rule 134·8
76

8,088
9,436

88 $\overline{)10,244·8}$ (116·4 galls.

And .. 116·4
76·

40·4 galls. of water required.

For copious examples illustrative of the same rule, and for a complete treatise on the business of reducing in all its branches, see Loftus's "New Spirit Calculator," price 1s. 6d. The object and limits of the present work preclude any further details on this point.

CHAPTER II.

GIN.

BRITISH gin is manufactured either by the old process of re-distilling plain spirits—that is, strong, tasteless whiskey—along with certain flavouring matters acceptable to the public taste, such as juniper berries, coriander seeds, carraway seeds, angelica root, &c.; or by the modern method of simply compounding plain spirit as received from the distiller, with *essential oil* of juniper, aniseed, &c., and afterwards reducing the mixture to the customary selling strength with water. As respects gin prepared in the latter way, it is to be observed, that the flavour is never so fine or delicate as when the still, and solid flavouring substances are used; but as the product can be sold at a cheaper rate than the distilled spirit, it is of course largely bought by persons with whom price is the chief con-

sideration, and whose trade lies principally amongst the lower classes of consumers.

Gin can be procured from the rectifier or compounder ready sweetened as well as plain.

The strength at which plain gin is usually permitted out by makers is either 17 or 22 U. P. Sweetened gin should, of course, be supplied at a lower price than unsweetened, as sugar is a much cheaper article than spirit, and the only disadvantage to the retailer of purchasing gin ready sweetened is the risk he sometimes runs in this way of getting an unduly weak spirit, without its being in his power to detect the imposition by means of the hydrometer. *The hydrometer, it should be well understood, and borne in mind, will not act properly in any liquid which consists of other ingredients than spirit and water.* Very small quantities of colouring and flavouring matters, such as are present in plain gin, rum, brandy, &c., will not sensibly affect the indications of the instrument, but sugar sufficient to confer a distinctly sweet taste renders the simple application of the hydrometer quite useless.

In order to test the real strength of a sweetened spirit, the only process is to distil

a measured sample in a small apparatus, such as the officers of Customs employ in the examination of foreign wines, until the whole of the spirit has come over, and to make up the latter with water to the same bulk as that which was subjected to distillation. The hydrometer, if now applied to this liquid, which consists of spirit and water only, will show the true strength, as there is no longer any solid matter present to affect its indications.

It is not to be expected, however, that publicans, as a body, will have either the time or the skill to perform such an operation when they wish to check the strength of a parcel of sweetened gin; and as no other mode of detection is possible, their only resource, if they suspect they are not being fairly dealt with, is to buy their gin plain, and sweeten it for themselves.

RECEIPT FOR SWEETENING GIN.

The taste of each locality or class of customers must, of course, govern the amount of sweetening matter to be added to gin, but in

all ordinary cases the following proportions will give a palatable article.

For 17 U. P. gin—full strength—to every 100 gallons add 33 lbs. sugar.

For 22 per cent. U. P. gin (usual strength) to every 100 galls. add 31 lbs. sugar.

N.B. Refined or best loaf sugar must be used on all occasions, to avoid the objectionable colour and flavour that would otherwise be imparted.

Instead of sweetening with solid sugar, a syrup called “capillaire,” is frequently employed. It may be formed of a convenient strength as follows:—

RECEIPT FOR CAPILLAIRE.

For 20 galls.—say, take 160 lbs. best loaf sugar, broken small. Cover with 10 gallons and a half of liquor (water).^{*} Heat until it boils, *stirring all the time*. When boiling add 2 ounces of pyroligneous acid (strong acetic acid, as sold by chemists). Continue the boiling and stirring for 20 minutes. Skim if necessary, and when cold rack off from the dregs.

^{*} *Liquor* is the name always given to water when used in any of the operations of compounding, brewing, &c.

N.B. *Each gallon of this syrup will contain 8 lbs. of sugar, and will exercise a proportionate sweetening effect.*

Accordingly, where capillaire as above prepared, is used in place of sugar,—

To every 100 gallons of gin 17 U. P., add 4 gallons 1 pint of the capillaire.

To every 100 gallons of gin 22 U. P., add 3 gallons 7 pints capillaire.

Important remark.—In sweetening gin or other spirit it is necessary, if solid sugar be used, to dissolve the required quantity separately in water, employing only as much as will be sufficient for the purpose. Sugar dissolves very slowly and imperfectly in spirits, especially if the strength be high. For this reason it is better to sweeten with capillaire, which, if carefully prepared according to the directions just given, will keep good in stock any length of time.

It should be understood that the sugar pays for itself in all liquors by increasing the quantity. *On the average, 16 lbs. of loaf sugar dissolved in one gallon of water, will produce 2 gallons of syrup, and so in all other proportions.*

As a general rule, gin, cordials, liqueurs,

and such-like compounds, can hardly be made with advantage on the small scale, except by those who possess a special knowledge of the art. The wholesale manufacturer obtains his supply of sugar, essential oils, and other flavouring substances in large quantities, and in the best market, and is thus enabled to produce a good article of uniform quality at much less cost than the retailer would incur, and also with far less risk of failure.

It may, however, be convenient at times for those who are not regular compounders to know how to make up *small* quantities of gin, &c. On an emergency, or for a special purpose, a little highly-flavoured cordial gin may be required, in which case the following simple receipt will be useful :—

RECEIPT FOR CORDIAL GIN.

Put into a wine bottle

- 1½ ounces oil of juniper,
- ½ ounce essence of angelica,
- 1 ounce oil of bitter almonds,
- 1 ounce oil of coriander,
- ½ ounce oil of carraway.

Nearly fill the bottle with spirits of wine,

shake it up well for ten minutes or so to incorporate the oils. Then pour the whole into a cask containing 100 gallons of clean spirits of wine, wash out the bottle once or twice with a little of the spirit, rummage the contents of the cask thoroughly, and fine, if necessary.

After a day or two the bulk may be used as required. It consists of strong, fine gin, which should be reduced in small portions at a time to the usual selling strength with water.

To sweeten the whole or any portion proceed as directed on pages 13, 14, using either sugar or capillaire.

A little *noyau* added when made up, and also a little infusion of chilies, will enrich the flavour and confer pungency.

In case the gin should become cloudy or muddy on the addition of the water for reducing, and refuse to clear itself by standing a short time, it will be necessary to employ finings, the best receipt for which is as follows:—

RECEIPT FOR SPIRIT FININGS.

1. Take of alum in crystals 1 pound, and divide it into 12 equal portions, which are to

be separately wrapped up in *blue* paper, and marked No. 1. Next, take of carbonate of soda—*not* washing soda—6 ounces. Divide this as the alum, wrap it in white papers, and mark each parcel No. 2. Or,

2. Instead of carbonate of soda may be taken carbonate of potash (salt of tartar), using alum 1 lb., dry salt of tartar $\frac{1}{4}$ lb.; make up in packets containing a twelfth part of each as before. In this case the white papers enclosing the salt of tartar must be kept in a dry, well-corked, wide-mouthed bottle or jar, as the powder is liable to run into a liquid.

The contents of one of the blue papers are to be dissolved in about a pint of *hot* water, and the solution well rummaged up with the spirit.

Then the contents of one of the white papers are to be dissolved in about a half pint of hot water, and the liquid added to the spirit. Continue the rummaging some minutes longer. Let the cask be bunged close, and the whole allowed to repose until the next day.

The above quantities are sufficient for 30 gallons of spirits, but many persons think it necessary to employ twice as much. The effect is not only to clarify the liquor and

render it quite bright and fine, but also to remove any unpleasant taste or smell there may be present.

N.B. By using the exact proportions of alum and soda or potash above stated, none of the chemicals will remain in the spirit, the whole being thrown down in a solid state to the bottom of the cask, thus effecting in a perfectly harmless and unobjectionable manner the clearing and purification of the spirit.

TO PURIFY TAINTED GIN.

Gin that has a faint or musty flavour may be easily and effectually purified as follows :—

4 ounces common potash,
4 ounces alum,
4 ounces salt of tartar.

Boil till dissolved in half a gallon of water. Mix thoroughly when cold with the gin. In four or five days the flavour will be found quite free from mustiness or other taint.

TO IMPROVE THE COLOUR OF GIN.

There is occasionally a peculiar darkness in the appearance of gin, to remove which, take

2 ounces pounded chalk and 3 ounces isinglass. Dissolve the latter in hot water to which a little strong vinegar has been added. Stir up the chalk in it, and add to the gin with brisk rousing. Enough for 100 gallons.

See also on this subject the remarks on page 21 under the head "Management of Gins."

Gin of no two makers is of precisely the same flavour or properties. This difference is most marked as the places of manufacture are remote from each other. Hodge's, Booth's, Vickers's, and Nicholson's gin, for example, have each their characteristic flavour or "palate" as it is termed; while the difference between Liverpool and Bristol gin, or between that prepared at Bristol and Plymouth, is as remarkable as the difference between Dublin and London stout, or Scotch and Irish malt whiskey.

The peculiarity of flavour depends mainly on the purity of the spirit used by the rectifier or compounder, and on the greater or less quantities of flavouring matter with which that spirit is impregnated. Occasionally, the distinctive taste and odour of gin are due to the employment of an *aromatic* substance, which modifies the usual flavouring ingredients

In more than one instance the flavour has been the result of accident, but consumers having been accustomed to it, and hence relishing that palate, it is found to be unwise or perhaps even impracticable to alter it.

In the preparation both of sweetened and unsweetened gin, the greatest care must be taken to prevent any *excess* of flavouring substances. The most esteemed samples are those which consist of very pure spirit slightly and skilfully flavoured.

The *creaminess* and *smoothness* so much admired in foreign Geneva are mostly the result of age. In English houses it is attempted to imitate these qualities by the addition of a little sugar. It is said that a mellow richness which answers well with gin resembling Hollands in flavour, may be given by the use of a very small quantity of garlic, Canadian balsam, or Strasbourg turpentine. The peculiar sharpness or property of "biting the palate," so commonly regarded as a sign of strength and superior quality, is easily imparted to the liquor by a little caustic potash. Sliced horse radish digested in the gin communicates piquancy as well as mellowness.

MANAGEMENT OF GINS.

It is very important that the whole of the casks and utensils employed for gin should be perfectly clean and properly prepared, so as not to give colour to the spirit; for if this article acquires the slightest coloured tint, its value is materially lessened; and when much coloured, the gin is hardly saleable.

When only slightly coloured, the addition of two or three pounds of acetic acid* to a pipe or butt, or of a spoonful or two to each gallon, will usually remove the colour at once, or as soon as mixed with water to make grog.

In bad cases the only remedy is to pass the tinted spirit through charcoal as often as may be requisite, till the objectionable hue disappears. If the flavour becomes weakened or impaired by the process, it may easily be restored with a small quantity of a mixture of the essential oils of coriander, juniper, carraway, &c., as in the preparation of cordial gin (see page 15, or the receipt on page 25). In making experiments of this kind, the great point, as

* May be obtained under this name from any chemist or druggist.

has already been noticed, is to avoid adding an *excess* of the flavouring ingredients.

It should be recollected that each of these essential oils is a powerful highly concentrated extract of some seed or bark, and that a single drop is sufficient to communicate a marked flavour to a pint or more of spirit.

As a rule it will be best before using any of the oils, to shake up a little with clean spirits in a bottle until thoroughly incorporated, and to employ the essence so prepared for flavouring purposes instead of the undiluted oils themselves.

Every prudent retailer will procure from a respectable chemist a one or two pound bottle of the essential oils most used, such as juniper, cassia, cloves, &c., and keep a small stock by him in a secure place, so that he may always be able to apply an immediate remedy to any gin that has become weakened or injured in flavour.

APPROVED RECEIPTS FOR GIN FLAVOURING.

1. For 100 gallons, take
80 drops essential oil of almonds,
8 drachms spirit of juniper,
2 ounces nitric acid (aquafortis).

The oil of almonds should be well shaken up with a little acetic acid.

N.B. It is necessary to be careful not to use more than the assigned quantity of this oil, which in the least excess is apt to produce unpleasant if not poisonous effects.

2. For 100 gallons, take

4 ounces compound spirit of juniper,

$\frac{1}{2}$ ounce essential oil of almonds,

1 ounce nitric acid.

Mix the oil as before.

Gin, it may be observed, is of all the spirits ordinarily kept by a publican the one which, when cleverly managed, yields him the greatest and securest profit. The reason of this is, that there is hardly any definite selling strength for gin, especially if it be sweetened. Within very wide limits no complaint is made by customers on the score of weakness, provided only the gin is creamy, palatable, and sharp-tasted. But the slightest taint, or the slightest fault of colour, or a sensible difference from the usual flavour, will lead to dissatisfaction and loss of custom. Strong or unsweetened gin is in comparatively little request, and then with few exceptions only amongst the respectable or

monied classes. At least three-fourths of the spirit sold over the counter of a public-house consists of sweetened or made-up gin; and as the sugar greatly alters the character of the liquor, and deadens the original strength, it is possible for the retailer to consult his own interests by a liberal addition of water without in any degree exciting the disapprobation or injuring the health of those who patronise his establishment.

As a tolerably safe general rule, there will be no occasion to fear dissatisfaction when sweetened gin is not brought below 35 or even 40 per cent. U. P. It is then nearly five times as strong as old ale. Much more is thought of a pleasant, warming, aromatic taste or smack, than of simple alcoholic strength. But as the most careful man may sometimes overshoot the mark in reducing, it is advisable to know how to restore the requisite degree of pungency and sharpness without having recourse to the use of so expensive an agent as spirits of wine.

Supposing then that by accident the strength of a parcel of gin has been lowered rather too far, a good and cheap remedy is the following:—

RECEIPT FOR GIVING ARTIFICIAL STRENGTH.

For 100 gallons :—

1 ounce cassia bails.

$\frac{1}{2}$ ounce chilies.

Steep for a week in a pint of spirits of wine ; then mix well with the gin.

120 gallons of gin as obtained from the rectifier, say at full strength—17 U. P.—may be safely made up to 136 gallons by the addition of water and sugar. For this purpose, 14 gallons of water and about 30 lbs. of sugar (or 3 gallons, 3 quarts, capillaire) should be the proportions employed. The strength after mixing will be at least 27 U. P., which is quite as high as sweetened gin is usually sold at over a retail counter.

To clarify the liquor and remove all traces of blueness or milkiness, add the finings described on page 16.

Caution.—It is quite unnecessary and most objectionable and dangerous to fine, as some retailers do, or have at former periods done, with *sugar of lead* and alum. Whatever care may be taken, a part of the sulphate of lead which is formed by the union of these two substances,

will remain suspended in the gin and produce poisonous effects on the consumers.

The supposed advantage of using sugar of lead is, the production of a more certain and rapid clarifying effect than can be got from the action of alum finings, and the brighter and more attractive *look* imparted to the spirit. But nothing can justify the employment of even small quantities of so fearful a poison as sugar of lead.

In Shannon's celebrated work on brewing and distilling, the following instructions are given relative to the reducing of unsweetened gin and preparing and sweetening British gin.

To reduce unsweetened gin.

Gin (full strength)	..	..	252	gallons.
Water	..	..	36	„
Total	..	..	288	„

Add flavouring (page 15),
proportioned to the quantity
of gin, rouse well, and again
add water

..	..	19
		<u>307</u>

This done, let one pound of alum be just

covered with water and dissolved by boiling. Rummage the whole well together, pour in the alum, and the liquor will be fine and bright in a few hours.

To prepare and sweeten gin.

Procure an empty puncheon or cask of the contents of about 133 gallons, and put 120 gallons of clean spirits of wine into it.

Then take

Oil of vitriol	..	..	$\frac{1}{4}$ ounce.
Oil of almonds	..	..	$\frac{1}{2}$ ounce.
Oil of juniper	..	..	1 ounce.
Spirits of wine	..	..	$\frac{1}{2}$ pint.
Lump sugar	..	..	$\frac{1}{2}$ lb.

Beat or rub these ingredients in a mortar, and have ready prepared half a gallon of lime water, one gallon of rose water; mix the whole in a pail with a stick until thoroughly dissolved. Then to the foregoing add 25 lbs. of sugar dissolved in about 9 gallons of rain or rain-water that has been boiled. Mix well with the materials in the 133 gallon cask.

To *force down* the same, boil 8 ounces of alum in 3 quarts of water for three-quarters of an hour; take it from the fire and dissolve in

it slowly 6 or 7 ounces of salt of tartar (carbonate of potash). While yet warm add to the gin and rouse briskly for five minutes. Let the cask stand as it is meant to draw from it. On every occasion of sweetening, the cask must be well washed out, and great care taken not to shake the cask while it is drawing.

These directions are, however, rather old-fashioned, and would probably not be found to yield such good results as the more modern and rational receipts given in the foregoing pages.

Beading.—Customers in general judge of the fineness and quality of a sample of gin—or indeed of other spirits—by the bead which it carries when newly poured out into a glass.

What is meant by the ‘bead’ is the appearance presented on the surface of the spirit by a number of pearly, oily-looking drops or beads hanging on the sides of the glass, which do not alter much when the glass is shaken with a churning motion in the hand. Even the best and finest gin may fail to show a good bead from however great a height, or however dexterously, it may be poured out; and in order to please the customers in this respect it is usual to add a little of the preparation called *beading* in the trade. The same receipt, it should be

observed, answers equally for gin, rum, brandy, and whiskey.

RECEIPT FOR SPIRIT BEADING.

Oil of sweet almonds .. 1 ounce.

Oil of vitriol ditto.

Rub together in a mortar, and add by degrees about two ounces of lump sugar, rubbing well with the pestle until it becomes a paste. Then add small quantities of spirits of wine until a thin liquid is formed. This quantity of beading is sufficient for 100 gallons of gin, and will cause the spirits to carry a fine pearly bead, when drawn from a little height into a glass.

N.B.—No publican should allow himself to remain unprovided with a small Wedgwood-ware pestle and mortar, such as apothecaries use. The cost is not more than two or three shillings, and the convenience of possessing it, for the manufacture of various useful preparations required in his business, is inestimable. It should always be well washed out with strong soda and water after being used, and put by dry. A chemist's measuring glass, which may be had for eighteenpence, will also

be found of great service.* The quantities of ingredients prescribed in a receipt can then be accurately measured out instead of being guessed at, as is too commonly the case. It is particularly important to measure or weigh with great nicety, according to the directions as to quantity, when dealing with articles so costly and powerful as essential oils.

A beginner in the trade of a publican is naturally anxious to conform as closely as possible, in matters of strength and flavouring, to the practice of other established houses in his neighbourhood which do a good business. When he knows that So-and-so is pleasing everybody with his gin and spirits generally, but especially with the gin he supplies, the beginner cannot act more wisely for his own interests than to endeavour to ascertain by every fair means open to him — such as procuring samples and examining them, procuring trustworthy information, &c.—what is the ordinary strength at which the spirit is sold over the counter to retail customers, and also what is the secret of the flavouring which gives such satisfaction. As has been previously remarked,

* These articles of the proper size, and the best quality, may be had of the publisher.

no man setting up in this trade, and resolving to sell the gin he receives from his rectifier with no other addition than sugar and a little water, irrespective of what may be the tastes or prejudices of the public round about him, can hope to go on prosperously, if he disdains to find out what those tastes are, and to gratify them as far as he is able. Three or four per cent. too much—or sometimes too little—of water, an ounce or two of sugar in the gallon, a few drops of juniper, the want of sufficient beading—all or any of these trifling differences may prove to him the road to a rapid fortune or a speedy bankruptcy.

Now, if a sample of gin be ready sweetened when it is bought for examination, how is it to be discovered what is its true strength?

1. One may take a measure pint, half-pint, or other convenient quantity of the *sweetened* gin which it is desired to imitate, pour it into a basin, and set it aside covered loosely with paper or a plate in a warm place, such as the corner of the stove, until all the liquid part has evaporated, leaving a dry residue. This residue, after being carefully scraped out, should be weighed on a piece of paper in a fine balance. The weight so found corresponds to

the quantity of solid sugar that must have been added to the gin at the time of making it up.

2. A chemist would, of course, proceed in a still more accurate and scientific manner. He would place a measured quantity of the sweetened gin in a retort or still, and distil over the whole of the spirit. This would be ensured in all instances by continuing distillation until the quantity originally put in the retort had diminished to about one-third of its bulk. The spirit which had passed into the receiving vessel he would now make up with water to the same bulk as that of the gin operated on, and then try its strength with the hydrometer in the ordinary way. It will be understood, that in this process all the sugar is left in the retort, and the spirit which had been previously mixed with it is now obtained in a state in which it is combined with water only, and therefore capable of being correctly assayed by the hydrometer.*

* The publisher would take this opportunity of intimating to publicans generally, that he undertakes to ascertain the true strength of any cordialized or sweetened spirit of which a sample may be sent him, with the utmost despatch and certainty, having a special distilling apparatus for such purposes. His charge is 10s. a sample.

But it is, of course, not to be expected that a person engaged in business all day will undertake a delicate operation of this kind, simple as it is in its principle and its details.

The following Table, originally published in the *Lancet*, shows the strength and the description of thirty-eight samples of gin, purchased promiscuously from rectifiers, and spirit-dealers and retailers in various parts of London, for examination, by the celebrated Analytical Sanitary Commission, some years ago. It is believed that the particulars herein given are not generally known to persons in the trade, as it is hardly probable that a medical journal would fall in their way. But the information must be full of interest to publicans, although several of the names have long since been changed for others.

RESULTS OF THE EXAMINATION OF 38 SAMPLES
OF LONDON GIN OBTAINED FROM RECTIFIERS,
SPIRIT DEALERS, AND RETAILERS.

NAME.	Place of Business.	Strength under Proof.	Quantity of Sugar per Gal.
1 Bowerbank & Sons .	77½, Sun-st., Bishopsgate-st.	29	Unswet.
2 J. & J. Vickers & Co.	Stoney-st., Borough	14	do.
3 Hodges & Co. . . .	Church-st., Lambeth	15	5½ oz.
4 J. Bell	25, Cable-st., Whitechapel	54	4½ "
5 Rose & Matthews .	4, Wells-st., Whitechapel	28	5½ "
6 R. Skipper	Cable-st.	37	5 "
7 W. Coates & Co. . .	25, High-st., Whitechapel	28	7½ "
8 D. Morton	2, Whitechapel-road	30	6½ "
9 F. Gunge	66, Cable-st.	40	5½ "
10 J. Hancock	11, Somerset Place, Aldgate	31	4½ "
11 J. Brown	30, High-st., Whitechapel	31	5½ "
12 W. Freshwater . . .	Back church-lane, Whitechpl.	39	4½ "
13 J. Williams	45, High-st., Whitechapel	37	5½ "
14 J. Brand	77, Leman-st., Whitechapel	29	6½ "
15 J. Colliss	King-st., Smithfield	40	6½ "
16 M. Chance	66, Long Lane, Smithfield	37	8½ "
17 J. Champion	33½, Gray's Inn Lane	42	5½ "
18 G. Stockdell	78, Gray's Inn Road	55	5½ "
19 J. Young	72, High Holborn	41	6 "
20 J. Denyer	15, High-st., St. Giles	37	4 "
21 W. Latimer	47, Broad-st., St. Giles	39	4½ "
22 R. Sinclair	36, High-st., St. Giles	23	13½ "
23 H. Cusack	6, Tottenham-court-road	31	5½ "
24 W. Cripps	1, Newport Market	39	5½ "
25 W. Tillyard	19, Moor-st., Soho	43	4½ "
26 W. Moss	Seven Dials	27	5½ "
27 G. A. Compton	84, Edgware-road	32	6½ "
28 Walker & Co.	63, Westminster-bridge-road	30	9½ "
29 C. Watchorn	1, Marsh Gate, Lambeth	26	6½ "
30 J. Empson	107, Lambeth Marsh	39	5 "
31 T. Granmar	Waterloo-road	28	7½ "
32 W. Jorden	52, Tothill-st., Westminster	58	3½ "
33 W. Carpenter	11, King st., Westminster	35	7½ "
34 W. Vickress	11, Bridge-st., Westminster	28	8 "
35 H. Bennell	High-road, Knightsbridge	61	6 "
36 W. Weatherbey	Knightsbridge	44	4 "
37 I. Upton	Hemmings row, Charing-crs.	44	5½ "
38 T. West	9, Bear-st., Leicester square	37	5½ "

With regard to the preceding Table, it will be observed, that amongst the publicans there are samples of gin which, from their extremely low strength, must be viewed as quite accidental or exceptional cases, for no victualler in his senses could think of reducing to 55 or 61 U. P. purposely, and yet hope to retain respectable custom at his house. Even in the lowest neighbourhoods these selling strengths, if maintained for any length of time, must lead to dissatisfaction and loss of trade. With few exceptions only, the rest of the samples are not greatly different from each other, the average of twenty-four houses being 37 U. P. This may be assumed as a fair remunerative strength for ordinary sweetened gin. In the very weak samples above adverted to there is reason to fear some fiery ingredient, such as Cayenne, must have been added, to conceal the want of proper spirituous pungency; and, indeed, the *Lancet* commissioner—an accomplished doctor and chemist—more than hints that an adulteration of the kind was practised.

As respects the quantity of sugar used, there appears to have been considerable variation. Excluding the excessive amount in No. 22, the average proportion per gallon is about $5\frac{1}{2}$ oz.

This would give a very agreeable and saleable gin, of the following composition in 100 gallons:—

78·3	gallons gin, at 17 U. P. (say)	=	6,500
19·6	,, water, at 0 strength	=	0
2·1	,, sugar, ditto	=	0
<hr/>			
100			<hr/>
			6,500(65
And 100 less 65 = 35 U. P.			

To explain the preceding calculation, we reckon that if 1 gallon of the sweetened spirit is to contain $5\frac{1}{2}$ ounces of sugar, 100 gallons should contain 550 ounces; and as every 16lbs., or 256 ounces of sugar, take up the space of a gallon (see page 14), 550 ounces must occupy the bulk of 2·1 gallons. Deducting 2·1 from 100 (the required quantity), there remains 97·9 gallons to be made up of strong gin at 17 U. P. and water. Now sugar may, in all cases, be regarded as having practically the same effect as water in lowering spirituous strength. Consequently the question reduces itself to the inquiry, in what proportions must gin at 17 U. P. and water be mixed together, so as to form a compound which shall have the strength of 35 U. P.?

By the rule of Alligation Alternate in arithmetic, we say :

$$\begin{array}{rcl}
 \text{(Factor for 35 U. P.) } 65 & \left\{ \begin{array}{l} 83 \text{ (factor for 17 U. P.) } 65 \\ 0 \text{ (water, no strength) } 18 \end{array} \right. & \\
 & & \hline
 & & 83
 \end{array}$$

Here, according to the well-known arithmetical process, we subtract 0 from the mean rate 65, and place the difference in a line with the factor for 17 U. P. We also subtract the mean rate from 83, the factor for 17 U. P., and set the difference opposite to 0, or water.

We thus obtain the proportions generally in which the two ingredients, the strong gin and the water, should be mixed, so as to give a product having the required strength of 35 U. P.; that is to say, to every 65 gallons of the gin must be added 18 gallons of water.

But as the total quantity in the present case is to be 100 gallons, we say—

As 83 (the sum of the proportional parts) is to 65 (one of the ingredients, the spirit), so is 100 to the quantity of spirit that should be present in 100 gallons; or, as 83 is to 65, so is 100 to 78·3. Take 78·3 from 100, the difference, 21·7 gallons, represents the water necessary. But of these 21·7 gallons 2·1 gallons are to consist of the bulk occupied by the sugar when in solution. Therefore 21·7, less 2·1, or

19·6, gallons, equal the water that should be used.

The three ingredients are now determined, as previously shown. The method of calculation here pursued is fully and clearly exemplified in Loftus's "New Spirit Calculator," page 36, proposition viii., and will be found very simple in practice, although the details may appear somewhat tedious in description.

We add two excellent receipts to those which have been previously given for the preparation of cordial gin and sweetened gin. These present receipts have been tried in numberless establishments for the last fifty years, and have never failed to produce satisfactory results.

CORDIAL GIN (2). INGREDIENTS.

Plain gin, 22 U. P..	..	90 gallons.
Oil of almonds	..	1 drachm.
Oil of cassia	} of each	.. 2 drachms.
Oil of nutmeg		
Oil of lemons		
Oil of juniper	} of each	3 drachms.
Oil of carraway		
Oil of coriander		
Essence of orris-root	} do.	5 fluid oz.
Essence of cardamoms		

Orange-flower water	..	1 pint.
Lump sugar, dissolved in		
4 galls. water	.. ..	56 to 60 lbs.

The oils and essences are to be dissolved in 2 quarts of spirits of wine, and added gradually to the gin until the desired flavour is produced. The solution of sugar is then to be mixed in, along with a sufficient quantity of soft water, in which 4 ounces of alum have been dissolved, to make up the quantity to 100 gallons.

When the whole is perfectly blended, 2 oz. of salt of tartar (carbonate of potash), dissolved in two or three quarts of hot water, should be added, and the liquor again well rummaged up. After this the cask is to be closely bunged up and allowed to repose. In a week, or less, it will have become brilliant, and may either be racked or drawn from the same casks.

Quantity, 100 gallons. Strength, 30 U. P.

SWEETENED GIN (2). INGREDIENTS.

Plain gin, 22 U. P..	..	95 galls.
Lump sugar, dissolved in		
3 galls. water	.. ..	40 to 45 lbs.

Mix well and fine down, as in the last receipt.

Product, 100 gallons. Strength, 26 U. P.

CHAPTER III.

BRANDY.

NEXT to gin, brandy is probably the article most in request in an English inn or public-house, and therefore of the second greatest importance to the trader. Whiskey, however, is becoming a formidable rival to brandy, and will no doubt ultimately take the first place in general consumption, as a wholesome, agreeable spirit; but as yet the taste of the people of England inclines to a preference for brandy.

Foreign brandy, it is well known, is, or should be, obtained by distilling the lees of wine, and storing the produce in new oak casks. Of late years, since the partial failures of the vine on the Continent, a great deal of so-called foreign brandy is made by flavouring ordinary corn or sugar spirit with various oils and ethers, so as to resemble as closely as possible the genuine or original article.

Common British brandy is prepared by adding to plain spirit French wine vinegar, alcoholic extract of prunes, burnt sugar for colouring, and a little foreign brandy. Sometimes the liquid procured by distilling spirit with the *marc* or refuse of the grape press, mixed with *argál*, or crude wine stone, is added to plain spirit, and the colour and flavour brought up by the addition of fruit tincture and caramel (burnt sugar).

The process of compounding is all that is resorted to, as a general rule, in the fabrication of British brandy. Certain rectifiers possess the art of imitating the best French brandy much more successfully than others in the trade. In many cases, that which passes under the name of British brandy consists of little else than diluted spirits of wine coloured with burnt sugar.

Mr. Tovey, in his work on foreign and British spirits, has the following apposite remarks on the subject of home-made and foreign brandy:—

“The reduction of the duties upon foreign spirits, leaving a difference of only 5d. per gallon in favour of British manufacture, has caused the introduction into England of various

imitations of French brandy, and large importations are arriving from Holland and the Mediterranean ports, with casks of spirit bearing most impudently the brand of Cognac; in fact, it is known to the writer, that many houses send over to Hamburg freshly emptied casks, having the original brand of some of the best shippers of Cognac brandy. These casks are filled with Hamburg spirit, pale or brown, at a cost of about 3s. per gallon at proof, and those who are not acquainted with the manœuvre, are too often deceived by the external appearances. A favourable opportunity is given for this fraud by the brandy being generally sold in bond; and the impression upon the minds of the uninitiated is, that if they get their spirits direct from bond, they are secure from imposition. The importer and dealer in this spurious brandy has a considerable advantage over the British rectifier; he sells the article in bond, his customer paying the duty; whilst the rectifier, who has to find capital for duty, runs altogether a greater risk; and whilst he supplies a very much better brandy, derives considerably less profit. If the spirit merchant requires any other than Cognac brandy, he may be assured

that the English manufacture is infinitely superior to any we have mentioned, owing to the improvement in the stills; the boilers being worked with steam, by which means contact with the fire is prevented, all empyreumatic character is avoided, and the greatest care is now taken in order to procure a perfectly clean spirit. In this the majority of makers have succeeded, and by the addition of judicious flavouring, British brandy is infinitely superior to foreign fabrications. We have no national prejudice in making this assertion; it is founded upon the practical experience of very many years. We know that with the English manufacture the process is simple, and a genuine, wholesome spirit is obtained; whilst in the foreign importation, essential oils and deleterious drugs are used, which render the spirit pernicious. We again repeat our opinion, and are prepared to support it, that there is no brandy manufactured abroad equal to our own British manufacture, excepting, of course, the produce of the grape. But in many wine districts the brandy is inferior to our corn spirit. The public should not be imposed upon by advertisements of "Imperial," "Patent," "Channel Islands," or

other high-sounding titles. Let a respectable rectifier who understands his business produce his best British brandy, and he may challenge the foreign distiller to show its equal. It would be invidious of us to point out particular houses as famed for the excellence of their spirits. Such houses, however, may be easily discovered by those disposed to make the inquiry."

There can be no doubt whatever that Mr. Tovey is right in these statements, and that well-made British brandy is superior, both as an agreeable stimulant beverage and as a medicine, to the foreign imitations of true Cognac. The public, however, are greatly prejudiced against the very name of "B. B.," and it is hardly to be wondered at, when one recalls the detestable and pernicious trash which used at one time to be sold under that designation.

Brandy is imported in puncheons, hogsheads, and quarter casks. The spirit costs in puncheons 2d. per gallon less than in hogsheads, while hogsheads are 3d. per gallon cheaper than quarter casks. Consequently, brandy shipped in quarter casks, is from 5d. to 6d. per gallon dearer than that shipped in puncheons.

The ordinary strength at which brandy is shipped in quarter casks is about 4 per cent. O. P., and it is generally bonded in England, at between 2 and 3 O. P. The very close system of gauging now adopted by the Customs, charging duty both upon the quantity and strength to the tenth of a gallon, gives the merchant but little margin for wastage by sampling and racking, &c.; and it is too frequently the case, that duty is paid upon much more than is contained in the casks.

Strength of Foreign Brandy.—The ordinary strength of brandy, as sold by dealers or importers to the retailer from duty-paid stock, is 10 per cent. U. P.

The retailer makes it up according to his own standard, or so as to suit the taste of the locality. As a rule, customers will not object to the strength being reduced to 25 or even 30 U. P. Indeed, the more water is added in reason, the more the article gets liked and praised for mildness and softness of flavour. Fieriness or harshness in brandy is an unpardonable fault with most consumers. Those who can afford to drink brandy as a regular thing are people by whom delicacy of

flavour and the absence of all heat on the palate are much more regarded than is the fact of the spirit being rather weak.

So long as the public are determined to pay no more than a certain old-established price for an expensive spirit like foreign brandy, and *will* have their glass, good measure, for fourpence only, so long the publican must conform to the crotchet of his customers, and let them have their fourpenn'orth; but as he is not called upon to ruin himself and his family by concession to an unreasonable demand, he must in self-defence liquor the stuff until he can obtain a fair profit on it, at the price which the drinkers have chosen to fix for themselves.

We would say, as regards foreign brandy however, that it is always a great recommendation to a house to be known to sell a really pure, good article of this kind. A drop of *genuine* Cognac is so much thought of for slight complaints of the stomach and bowels, and is, in truth, so comforting and efficacious on occasions, that a high reputation generally attaches to the place where one can confidently reckon on being able to procure such brandy, irrespective of the price that has to be paid for it. A small stock, then, should always be kept

of the "right stuff" to meet such demands, and to maintain the character of the house.

Foreign brandy, as it comes direct from the bonded warehouse, is considerably stronger than as sold by the dealer to the retailer. The average strength of the spirit when imported is about from 2 or 3 O. P. to 2 or 3 U. P. There must be a considerable advantage, therefore, to a publican in "clearing" his own brandy, instead of buying it ready diluted from the dealer. All that is required is the command of a little capital to pay for a few casks of bonded brandy at a time. Besides, the quality of the article is often superior to that of the spirit which comes to the retailer through a dealer, and it confers a high name on a man, and leads to a better opinion of his goods, when people hear that he keeps a bonded stock of his own.

On this point it should be remarked, that shippers as well as importers are not at all aware that the *smallest* quantity of foreign spirits allowed to be imported in casks for home consumption is 20 gallons. Much annoyance has been caused by some of the importers through ignorance of this regulation.

Brown brandy differs from pale merely in

respect of its containing colouring matter derived from the oak staves of the casks, or from the addition by the distiller of burnt sugar or red sandal wood. This colouring matter imparts at the same time an astringency or roughness to the taste, which is valued as being of a tonic character, and which would seem to constitute the chief difference between the medicinal virtues of brandy and other spirits.

There is a considerable loss in the apparent strength of brandy by the presence of colouring; the weight of the latter necessarily affects the density of the spirit, lowering it by the hydrometer if of deep colour, as much as 3 to 4 per cent. Consequently, brown brandy marking proof by the instruments is in fact generally 3 per cent. O. P., whilst the pale or uncoloured is the exact strength which the hydrometer indicates.

It is of importance to bear this fact in mind when reducing with water

The common practice in France is to add spirits of wine and colouring to raise the natural strength of the liquor, and fit it for the British market. This is done to any extent desired by the English purchaser, and the

quantity and prices of the substances so added are regularly set out in the invoice. When a purchaser is not well acquainted with the trade, and desires a strong spirit at a low rate, the practice is to sell him brandy so mixed as genuine. The *finest brandies* average from 5 to 10 U. P., and are seldom stronger than 2 U. P.

MAKING UP FOREIGN BRANDY FOR COUNTER TRADE.

RECEIPT. (1.)

Cognac (10 U. P.) . . .	20	gallons.
British Brandy (17 U. P.) . . .	5	„
Water	4½	„
	<hr/>	
	29½	
	<hr/>	

Strength of mixture 25 U. P.

RECEIPT. (2.)

Cognac (full flavoured) (5 U. P.)	72	gallons.
Spirit of wine (58 O. P.) . . .	10	„
Water	25	„
	<hr/>	
	107	
	<hr/>	

Add 1 pint good colouring. Let the whole be well rummaged up, and allowed to stand two days. Strength 22 U. P.

It need hardly be observed that British brandy is not like cordial gin, an article which the retailer can properly prepare for himself from plain spirit and flavouring materials. No one but the regular rectifier or compounder can undertake this manufacture with any prospect of success, *although in an emergency spirit of wine, reduced with water and coloured with a little burnt sugar, has been found to sell for British brandy, without the least suspicion being entertained by the consumers of the true character of the liquor.*

The only thing that is to be done with B.B., therefore, is to reduce it to the usual selling strength by the use of water only.

In America, where black tea is cheap, it is frequently employed to impart the roughness and flavour of brandy to coloured spirit. A really good cider-spirit thus treated forms a passable mock brandy.

CHAPTER IV.

RUM.

Rum is a spirit obtained by distillation of the fermented juice of the sugar-cane, and owes its peculiar smell or taste to the practice of allowing the lees or scum of the crude syrup and pieces of the tops of the cane to remain in the liquid during fermentation. It is indeed, in many cases, obtained from no better materials than the fermented skimmings of the sugar-boilers, the drainings of the sugar-pots and hogsheads (molasses), the washings of the boilers and other vessels, together with sufficient recent cane-juice or wort, prepared by mashing the crushed cane, to impart the necessary flavour.

Volatile oils and acids are no doubt engendered in this mixture, and combining with the spirituous vapour that rises on the wash being heated in the still, communicates a very marked flavour to the product of the distillation.

The fact that the plain spirit made in this

country from cane-sugar or molasses, both of which are comparatively free from the coarse impurities previously mentioned, possesses little, if any, of the characteristic aroma or taste of rum, may be thus explained.

The principal countries in which rum is produced are the East and West Indies. The island of Jamaica yields the finest quality. Wherever the sugar-cane is cultivated, rum is distilled.

An objectionable flavour, known as *still-burnt*, so often met with in rums, is probably owing to the use of too large a proportion of *dunder*, or the lees of previous distillations, a substance which serves all the purposes of yeast in the fermentation.

From the present low state of the market price, the distiller of rum has no profit; but being the grower of the material, and having his capital embarked in the trade, he is compelled to manufacture the spirit from necessity, and the sooner he can turn the article to account, the better is he enabled to bear any losses and meet his engagements.

Demerara and Essequibo rums have long been highly esteemed in America, and have of late found much favour in the English market,

the quality being considered as almost equal to that of Jamaica.

In Brazil, rum is manufactured on a large scale, the produce being exported to America and Europe.

Age has a more than usually marked effect on the character of rum as a beverage, rendering the spirit soft and mellow, and enhancing its commercial value.

By some persons, the liquor called "pine-apple rum" is supposed to be the produce of the fermentation and distillation of the juice of the pine-apple, but this is altogether an erroneous impression. No doubt, the idea took rise in the practice of some of the planters many years since, who used to mix pine-apple juice with rum, so as to impart to it the characteristics which are properly the result of age. The delicious acid and sweet matter of the fruit would confer probably a very agreeable taste and odour on the spirit, but with the low prices at present obtainable for rum, any admixture of the kind could not be profitably practised. Instead of adding the juice, it was long the practice of the Jamaica planters to put sliced pine-apples into the casks containing the finer qualities of rum.

The average strength of rum, as imported, is about 20 per cent. O. P. Its colour is artificial, being derived either from the addition of burnt sugar, or from the absorption of a dark colouring matter from the wood of the cask. Like all other spirits, it is as white as water when it issues from the still.

As it has been discovered by chemists that rum derives its peculiar flavour from a certain essential oil and from *butyric acid*, it is possible to manufacture a very passable imitative rum from plain malt or molasses spirit, by impregnating the latter with so-called "Essence of Rum," which is a compound of the oil and the acid just mentioned. But it would not pay the rectifier or the publican to imitate foreign rum, however skilfully it might be done, at the present cost price of the imported spirit; the fact being that it serves the purposes of rectifiers, so cheap is rum, to buy it in large quantities, and after re-distilling and purifying it, to use the produce in place of British plain spirit. There is no advantage to be gained, therefore, by mixing foreign rum with home-made spirit, and the only possible source of profit to the retailer is to reduce with water what he procures from the custom-house or the

importer, until the usual selling strength is reached.

As a general rule, rum for counter trade may be safely reduced to 30 U.P., but not lower.

The sale of rum has long been declining in this country. The spirit, although pleasant enough for occasional use, when of good quality, has too strong a flavour to agree well with the stomachs of people who are not in the habit of taking severe exercise, or of performing heavy bodily labour. It is found also to be ill-suited for those who are, as it is said, prone to biliousness. Even in the royal navy, whiskey or plain British spirit is now preferred by the sailors to rum. Gin and whiskey have, indeed, almost driven rum out of the market.

It should be recollected that the colouring matter present in nearly all rum as it comes into this country, has a considerable effect in reducing the apparent strength; so much so, indeed, that, as was remarked on page 48, with respect to brown brandy, the real strength is frequently from 3 to 4 per cent. higher than indicated by the hydrometer. The publican should bear this in mind, both when buying his stock of rum, and when about to reduce it

to his standard retail strength. Where, for instance, the instrument shows a sample of deep-coloured rum to be 22 O. P., the true strength may be safely estimated at 25 O. P., and water added accordingly. So large is the proportion of colouring used with inferior rums, that the stem of a hydrometer, if often immersed in them, becomes coated with a thick reddish crust, which, if not carefully removed, will falsify the indications of the instrument by as much as two per cent.

EXAMPLES IN REDUCING RUMS.

(1.) *For 100 gallons.*

Strong rum, at 25 O. P.	..	56	gallons.
Water	.. ..	44	„

100 „

Strength after reducing, 30 U. P.

N.B.—There will be a large profit on the retailing of a rum of this strength, as rum bears water better than almost any other spirit, and the present cost price in bond is extremely low.

(2.) *For 100 gallons.*

Strong rum, at 20 O. P. .. 62·5 galls.

Water 37·5 „

100·0 „

Strength, 25 U. P.

This article is certain to give general satisfaction, and will at the same time afford a very handsome profit.

CHAPTER V.

WHISKEY.

THIS spirit, now so largely consumed in England, as well as in all other parts of the United Kingdom, is obtained either from malt wholly, or from a mixture of malt and raw grain. Considerable quantities of plain sugar or molasses spirit are also sold under the denomination of whiskey; a little of the genuine article being added, in order to confer flavour and character.

Malt whiskey is, as a rule, the most esteemed. Nearly all of it is made in the small Scotch distilleries. It is much more highly flavoured than the Irish spirit, and in addition possesses the smoky taste known as "peat-reek." It requires less maturing, also, than the other kinds of whiskey—that is, it requires less time to improve and become soft.

The Irish raw-grain spirit, so called, finds considerable favour in the English market.

When old, it is excellent in every respect, but when new, it is much more fiery and harsh than Scotch malt spirit of an equal age.

In England, the distilleries, which though few in number are on a scale of great magnitude, produce grain or sugar spirit only, the greater part of which is disposed of to rectifiers for conversion into British brandy and gin.

Sugar or molasses spirit when recently distilled is almost undrinkable, but, by keeping, it improves wonderfully, and becomes mild and palatable. As explained in a previous chapter, there is no similarity in point of flavour between the plain sugar or molasses spirit manufactured in this country, and rum of foreign or colonial production.

A very small proportion of the highly-flavoured malt whiskey of Scotland, and especially of that part of Scotland called the Island of Islay, communicates the character of genuine malt whiskey to a large bulk of plain or silent spirit. It is a common practice with dealers to blend the less expensive raw grain or sugar spirit, above spoken of, in this way, and to sell the whole as malt whiskey. Indeed, to many customers, a spirit so prepared is more agreeable than malt whiskey alone would be, as

they find the oil and peat-reek too strong in the concentrated natural form.

Blending the produce of different distilleries is the great art of the successful whiskey dealer. The article so extensively sold in England as Kinahan's or Dunville's whiskey consists of a judicious mixture of several spirits, and owes its popularity to its softness and fulness of flavour, and the entire absence of heat on the palate. Of course, a mellow, smooth-drinking spirit like this would not be at all acceptable to the poorer classes of consumers, who prefer a sharp, potent drink, that brings the tears into the eyes, and makes the throat smart as it goes down. The price, moreover, places the blended spirit beyond their reach.

Whiskey generally derives great advantage from being put in the first instance into sherry casks, that is, casks which have been used to hold sherry. Contact with the lees of the wine softens and mellows the spirit, besides imparting to it a light brown tint, in a surprisingly short time. Most of the finer Irish whiskey is now treated in this manner.

In making up whiskey for the bar trade, water may be added till the strength falls, as a rule, to about 25 U. P. Lower than this is apt

to give dissatisfaction, especially to the working people, who are accustomed to look for a sharper smack in whiskey than in other spirits. A good receipt is as follows:—

RECEIPT FOR MAKING UP WHISKEY.

(1.) *For 100 gallons.*

Whiskey (as it comes direct from the distillery or the bonded store), at	galls.
say	10 O. P. 68
Water	32
Strength 52·2, U. P.	<u>100</u>

(2.) Whiskey, at 21 O. P. ..	64½
Water.. .. .	35½
Strength 21 U. P.	<u>100</u>

(3.) Whiskey (matured from bond) at	78½
2 O. P.	
Water.. .. .	21½
Strength 20 U. P.	<u>100</u>

Whiskey, it may be remarked, is sent out by distillers at or about the strengths of either 25 O. P., or 11 O. P.; and rarely at any other strengths. In Ireland, 25 O. P. is almost the universal degree, and in Scotland 11 O. P., the reason of the difference being that one is grain, and the other malt spirit, the latter of which is never so strong when distilled as the former.

After being in bond any length of time, the strength abates considerably; the quantity also falls off, owing to evaporation and natural waste; but the quality improves in a corresponding degree, and the article commands a much higher price. For ordinary retail counter business, no publican would think of buying old bonded spirit, both because it would cost him greatly more than new whiskey, and because it would be thrown away on that class of customers.

CHAPTER VI.

CORDIALS AND LIQUEURS.

As a general rule cordials and all compounds of a similar kind are troublesome to prepare, and can hardly be made with advantage on the small scale by those who have no special knowledge of the business. The wholesale maker obtains his supply of sugar, essential oils, and other flavouring substances in large quantities, and in the best market, and is thus enabled to produce a good article of uniform quality at a less cost than the retailer would incur, and also with less risk of failure.

Since, however, it may be at times convenient for persons, who are not regular compounders, to know how to make up small quantities of the different cordials, &c., in most frequent demand, a few general observations on the subject will here be given, together with a selection of the most useful and approved receipts.

GENERAL OBSERVATIONS.

The materials that should be employed in the preparation of liqueurs or cordials are—rain or distilled water, white sugar, and clean, flavourless spirit. To these may be added the substances used as “finings,” when it becomes necessary to clarify artificially. The utensils and apparatus required in the business are such as are ordinarily found in the wine and spirit cellar; and where the method by distillation is adopted, a copper still, furnished with a pewter head, and a pewter worm or condenser will also be needed.

A barrel, hogshead, or rum puncheon, sawn in two, or simply “unheaded,” as the case may demand, forms an excellent vessel for dissolving the sugar in; two or three large fluted funnels, or tun dishes, with some good white flannel, will occasionally be found useful for filtering the aromatic essences used for flavouring. Great care must be taken to ensure the whole of the utensils, &c., being perfectly clean and “sweet,” and well “seasoned,” in order that they may neither stain nor flavour the substances placed in contact with them.

In the preparation or compounding of liqueurs, the first object that should engage attention is the perfect solution in spirit of the aromatic principles of the substances which are to impart to the products their peculiar odour and flavour. This is done, either by simple solution of the oils, &c., or by slow *maceration*, as in the manufacture of tinctures and medicated spirits, or by maceration and subsequent distillation. The latter process, however, is now rarely resorted to, as being unnecessarily tedious and expensive. The products in this country are called essences or spirits, and are added to the solution of sugar (syrup or capillaire) or to sweetened spirit in the proportions required. Grain or molasses spirit is the kind usually employed for this purpose in England. As before observed, it should be of the best quality; as if this is not the case, the coarse raw flavour of the spirit is perceptible in the liquor.

Good rectified spirit free from any peculiar or objectionable flavour, and reduced to a proper strength with clear soft water, forms the proper material for the preparation of cordial liquors.

Before macerating the ingredients, if in the solid form, they should be coarsely pounded, bruised, sliced, or ground, as the character of the substance may indicate. This should not be done until shortly before submitting them to the action of the spirit; as, after they are bruised, they rapidly lose their aromatic properties by exposure to the air. When it is intended to keep them for any time in the broken-up state, they should be preserved in well-corked bottles or jars. The practice of drying the ingredients before pounding them, frequently adopted by ignorant and lazy workmen for the sake of lessening the labour, is, of course, even more destructive to their most valuable qualities than mere exposure to the air. The length of time the ingredients should be digested in the spirit should never be less than five or six days, but a longer period is preferable when distillation is not employed. In either case, the time may be advantageously extended to ten days or a fortnight, and frequent agitation should be practised during the whole period. When essential oils are employed, as is usually the case, to convey the flavour, they are first dissolved in a little of the strong spirit, by

shaking the whole together in a bottle, and when after this treatment they are added to the spirit, they should be mixed up with the whole quantity as rapidly and as thoroughly as possible, by long-continued "rummaging." The sugar employed should be of the best quality, and is preferable when made into capillaire or syrup before adding it to the aromatized spirit, and not until this last has been rendered perfectly fine or transparent by filtering or clarification, as the case may demand. Some spirits or infusions, as those of aniseed, caraway, &c., more particularly require this treatment, which is best performed by running them through a clean wine bag, made of rather fine cloth, having previously mixed them with a spoonful or two of *magnesia*; but in all cases clarification by simple standing should be preferred, and first attempted. Under proper management, liqueurs or cordials prepared of good materials will be found perfectly "clear" or "bright" as soon as made, or will become so after being allowed a few days for the depositing of sediment; but in the hands of the inexperienced operator, and when the spirit employed is insufficient in strength or quantity, it often happens that they turn out

“foul” or “milky.” When this is the case, the liquid may be “fined down” with the whites of 12 to 20 eggs per hogshead; or a little alum, either alone or followed by a little carbonate of soda or potash (salt of tartar), both dissolved in water, may be added, in the manner described under Finings. (See p. 16.)

The publican, however, will find an excellent and easy way of manufacturing cordial liquors, especially when it is inconvenient to keep a large stock on hand, is simply to flavour or colour as circumstances or business may demand, spirit of 60 or 64 U. P. kept ready sweetened for the purpose.

To do this to the best advantage, two descriptions of sweetened spirit should be provided, containing respectively 1lb. and 3lb. of sugar to the gallon. From these spirit of any intermediate sweetness may be made, which may be flavoured with any essential oil dissolved in strong spirit. As a general rule, the concentrated essences, made by dissolving 1 oz. of the essential oil in 1 pint of the strongest rectified spirit of wine, will be found well adapted for this purpose.

These essences, which should be kept in well-corked bottles, are employed by dropping

the oils cautiously into the sweetened spirit until the desired flavour is produced.

During this operation, the liquor should be frequently and strongly shaken to produce complete admixture. If by an accident the essence is added in too large a quantity, the resulting "milkiness" or excess of flavour may be removed by the addition of a little more spirit, or by clarification. In this way the majority of the liqueurs in common use may be produced extemporaneously, of nearly equal quality to those prepared by distillation.

For those which are coloured, simple digestion of the ingredients is almost universally adopted. The "process by distillation" should, however, be always employed to impart the flavour and aroma of volatile aromatics to the spirit, when expense, labour, and time, are of less importance than the production of a superior article.

A frequent cause of failure in the manufacture of liqueurs and cordials is the addition of too much flavouring matter. Persons unaccustomed to the use of strong aromatic essences and essential oils seldom sufficiently estimate their power, and, consequently, are very apt to add too much of them, by which the

liquor is rendered not only disagreeably high flavoured, but, from the excess of oil present, also "milky," or "foul," either at once, or, what is nearly as bad, on the addition of water.

The most certain way to prevent disappointment in this respect is to use too little rather than too much flavouring, for if the quantity proves insufficient, it is readily "brought up" at any time, but the contrary is not effected without some trouble and delay.

A careful attention to the previous remarks will render this branch of the compounder's art far more perfect and easy of performance than it is at present, and will, in most cases, produce at once a satisfactory article, "fine, sweet, and pleasant."

The cordials of respectable British "compounders" contain fully 3lb. of white lump sugar, per gallon.

Mere sweetened or cordialized spirits contain only from 1 to $1\frac{1}{2}$ lbs of sugar per gallon.

The customary strength of sweetened compounds in general ranges from about 64 to 80 per cent, U. P., that is, the mixtures are so prepared as to contain from 36 to 20 parts in the hundred of proof spirit. This is found by experience to be the best and most palatable proportion.

All the cordials or liqueurs for which there is any demand at hotels, or public houses, are comprehended in the following receipts, which give the most simple and approved mode of preparation of each on the small scale.

PEPPERMINT.

This well-known cordial is in greater request in every part of the kingdom than all the other cordials put together. The English oil of peppermint should always be used in preparing it; the foreign oil is cheaper, but it is apt to communicate a bad flavour, and there is no economy in the long-run in buying it.

RECEIPT.—English oil of peppermint 5 ounces. Add to rectified spirit of wine 3 pints, and shake the mixture well for some time in a corked bottle, capable of holding 4 pints, or more. Then empty into a cask of upwards of 100 gallons content, and add perfectly white and flavourless proof spirit—36 gallons—and rummage the whole for ten minutes; a solution of refined lump sugar, $2\frac{3}{4}$ cwt., in about 35 gallons of pure filtered rain-water, should then be added, and the contents of the casks well “rummaged up”

in the usual manner, for at least fifteen minutes. Sufficient clear rain-water to make up the whole quantity to exactly 100 gallons, having dissolved it in alum, 5 oz., is next added, and the whole is again well agitated for at least a quarter of an hour, after which the cask is bunged down, and allowed to repose for a fortnight before it is "broached" for sale.

OBS.—This formula produces a beautiful article, provided the ingredients are of good quality. Care on this point is particularly necessary in reference to the essential oil, which should only be purchased of some known respectable dealer. That prepared at Mitcham, Surrey, and hence called "Mitcham Oil of Peppermint," is not only the strongest, but the best flavoured, and though more than double the price of the foreign oil, is, in the long-run, much the cheapest.

The sugar should be sufficiently pure to dissolve in clear soft water, without injuring its transparency, and the cask should be a fresh emptied gin pipe, or one properly prepared for gin, as, if it gives colour, it will spoil the cordial.

When these particulars are attended to, the

product is a "bright" transparent liquor as soon as made, and does not require fining.

Should there be the slightest milkiness, the addition of 2 oz. of salt of tartar, dissolved in a quart of hot water, will have the effect of clearing it down in the course of a few days. The product is 100 gallons of cordial at 64 U. P.

RECEIPT (2). For a smaller quantity ; 10 galls.

Oil of peppermint	..	1 ounce.
Rectified spirit	..	3 galls.
Loaf sugar	.. ..	30 lbs.
Water..	.. ..	5 galls. 1 pint.

Rub the oil in a mortar with a few drops of strong acetic acid, or simply shake up in a bottle with a pint of the spirit. Dissolve the sugar in the water, add the oil prepared as above, and fine with two quarts of isinglass finings, or with a little salt of tartar, as in first receipt. Strength 60 U.P.

RECEIPT (3). For common purposes, or on an emergency, when stock happens to be run out.

Peppermint water (ordinary)	1 gallon.
Plain spirit or gin, 22 U. P.,	1 ,,
Lump sugar	6lbs

Mix well. The peppermint water may be obtained of good quality at most herbalists or from a chemist.

CLOVES.*

For 10 gallons.

Oil of cloves	..	..	1 ounce.
Rectified spirit	..	..	3 galls.
Loaf sugar	..	..	30 lbs.
Water	..	..	5 galls. 1 pint.

Mix the oil with the spirit, and proceed otherwise as above directed, with respect to peppermint. Lastly, colour with a little burnt sugar (caramel), or with archil, if wanted of a pink tint.

CINNAMON.

CARRAWAY.

ANISEED.

For any of these use the appropriate oil with

All these cordials, peppermint excepted, are best made in small quantities at a time, as the sale is never very quick or extensive, and they are apt to deteriorate in quality when long kept.

water and syrup in the proportions given for peppermint. Colour according to fancy.

Strength, about 60 U. P.

N.B.—Cinnamon cordial is seldom made with oil of cinnamon, owing to its high price, but with either the essential oil or the bark of cassia, using about 2lbs. of sugar to the gallon. If the oil of cassia be employed, $1\frac{1}{4}$ ounces will be required for 10 gallons of cordial, or about 10lbs. of the buds or bark digested in strong spirit. The difference of flavour between the cassia and the true cinnamon compound is too slight to be detected.

The addition of 5 to 6 drops of essence of lemon and essence of orange-peel, with about a spoonful of essence of cardamoms per gallon is an improvement.

CURAÇOA.

For 10 gallons.

Rectified spirit	..	..	3 galls.
Water	..	..	5 „
Sugar	..	..	30lbs.

Rub the thinly-cut rinds of 9 Seville (bitter) oranges with lumps of sugar, until the whole

of the essential oil is absorded. Put this saturated sugar (oleo-saccharum) into a bottle with 2 drachms of oil of cassia, 1 drachm oil of mace, and a pint of rectified spirit. Shake up well, and add to the syrup and spirit prepared as above directed. Rummage; colour with Brazil wood, 1 ounce, and a spoonful of burnt sugar. An excellent receipt.

RASPBERRY.

For 10 gallons.

5 gallons fresh raspberry juice.

2 gallons rectified spirit.

30 lbs. refined sugar.

1 gallon 1 pint water.

$\frac{1}{2}$ drachm oil of cassia.

$\frac{1}{2}$ drachm Vanilla root.

First steep the Vanilla root, cut fine, in a wine-glassful of strong spirit for two or three days. Then add the Vanilla extract and the oil of cassia (rubbed in a little acetic acid) to the specified quantity of spirit, and stir well together. Dissolve the sugar in the raspberry juice and liquor; add the spirit to the syrup thus produced; blend the whole

thoroughly ; and when at rest fine with a quarter of a pint of isinglass finings.

In some receipts it is recommended to use colouring, but this addition seems unnecessary when the natural tint of the fruit is good.

Raspberry of inferior quality, but still a very passable article, may be compounded as follows :—

For 10 gallons.

3 gallons 2 quarts raspberry juice.

1 gallon 2 quarts plain spirit.

4 gallons $5\frac{1}{2}$ pints liquor.

$11\frac{1}{4}$ lbs. loaf sugar.

$11\frac{1}{4}$ lbs. raw sugar.

$\frac{1}{2}$ drachm oil of cloves.

$\frac{1}{2}$ drachm oil of cassia.

1 pint best colouring (burnt sugar).

First rub the oils with a little acetic acid, then blend with the spirit, to which add the juice. Dissolve the sugars in the liquor ; stir in the colouring ; mix all together, and fine with isinglass.

Strength of both qualities about 80 per cent.
U. P.

LOVAGE.

For 10 gallons.

5 ounces of lovage root, cut small, and steeped for a fortnight in strong spirit.

$1\frac{1}{2}$ drachms oil of nutmeg.

$1\frac{1}{2}$ drachms oil of cassia.

$\frac{1}{2}$ drachm oil of caraway.

3 gallons rectified spirit.

28 lbs. refined sugar dissolved in $5\frac{1}{2}$ gallons liquor.

1 pint of colouring.

Rub the oils with a little acetic acid and add to the spirit: then the extract from the root, and lastly the syrup and colouring. Blend well together, and fine, if necessary, with isinglass.

Strength, about 60 U.P.

CHERRY BRANDY.

This favourite cordial should be prepared from the freshly-gathered fruit, which after being steeped in strong spirit yields a tincture that must then be brought to a proper strength and sweetened. There are many receipts in

vogue, but the following will perhaps be found the simplest and most useful of any :—

Take any quantity of small black cherries ; pull off the stalks, and slightly bruise the fruit in a tub with a mallet or wooden hammer : transfer to a cask, and cover over with strong spirit, stirring up the whole occasionally, particularly for the first few days. The cask should be placed on its head and a tap inserted before the crushed fruit is put in, a small basket being fastened inside over the tap-hole, to prevent the fruit from clogging up the tap. This process will yield a very black, strong, liquor. As the cordial is wanted for use, draw off a gallon at a time, and add to it a gallon of water and 2 lbs. of sugar.

As often as any of the spirituous juice is drawn off, an equal quantity of strong spirit should be poured in at the top, until the produce begins to show a weakness of colour or flavour, when fresh fruit must be added.

In some houses it is customary to mix cherry brandy with elderberry wine, and sell the whole under the name of the former. To prepare the elder wine, elderberries must be steeped in spirit, and the infusion treated in the same manner as the cherries. In making up the

wine, cider may be substituted for a portion of the water with advantage. A few drops of sweet spirit of nitre improve the flavour. Equal quantities of the cherry brandy and the elder wine may be mixed together.

If the cordial be required with the whole cherries preserved in it, as is usually the case at the shops of confectioners, &c., a different process must be adopted. To make one gallon, take 12 lbs. of morello cherries, and cut off the stalks, so as to leave about half an inch of each on the fruit. Prick each cherry with a needle, put the fruit into bottles and cover it with brandy; cork close and stop for a month; then pour off the spirit, and to every quart add eight ounces of powdered sugar-candy. When dissolved, pour the brandy back upon the cherries.

GINGER BRANDY, OR CORDIAL.

For 10 gallons, take—

2 lbs. Jamaica ginger.

3 gallons rectified spirit.

30 lb. refined sugar.

$\frac{1}{2}$ ounce citric (or tartaric) acid.

1 wine glassful Vanilla extract.

$\frac{1}{2}$ pint colouring.

Bruise the ginger coarsely ; steep in some of the spirit several days and strain off. Prepare the Vanilla extract, as directed under raspberry, (page 76). Well wash the ginger with water to get out the whole of the spirit : mix all the ingredients together, and liquor sufficient to make up the quantity to ten gallons. Fine with isinglass, if desirable.

Strength, about 60 U. P.

A commoner kind of ginger cordial or *gingerade* may be had by simply adding essence of ginger to plain spirit or British brandy, and sweetening with syrup. To make essence of ginger economically, steep 12 lbs. Jamaica ginger for a fortnight in $2\frac{1}{2}$ gallons of strong spirits, then press and strain off. The best way of preparing the cordial as it is wanted for use is to add the essence, little by little, to any given quantity of syrup, until an agreeable, not too hot, compound is formed, and then if the liquor be too thick dilute with water.

RUM SHRUB.

For 10 gallons, take—

1 gallon Seville orange juice.

$\frac{1}{2}$ gallon lemon juice.

3 gallons rum (common quality), at
proof.

11 lbs. refined sugar.

14 lbs. raw sugar.

4 gallons liquor.

Dissolve the sugars in the liquor; blend all the ingredients together, and clarify with a pint of isinglass finings.

Strength, 70 U. P.

ORANGE BITTERS.

For 4 gallons, take—

2 ounces cardamom seeds.

8 „ gentian root.

8 „ dried orange peel.

Steep in two gallons of spirits of wine for a fortnight, then add half a gallon of capillaire or 4 lbs. loaf sugar, and half a gallon of water.

BITTERS (*various*).

(1.) Steep 1 lb. gentian root, 8 ounces dried orange peel, 1 lb. grains of paradise, in $1\frac{1}{2}$ gallons spirits of wine. After fourteen days, strain, and add half a gallon of raisin wine, and colour with two drachms of cochineal.

(2.) Bruise 2 ounces of coriander seeds and 8 ounces of Virginia snake root: steep for five days in a gallon of plain gin (22 U.P.) Shake up occasionally, then strain off. Put into a bottle half a pint of strong spirit of wine, 1 ounce of orange peel, and $\frac{1}{4}$ ounce oil of carraway. Shake the oils and spirit together until well mixed. Stir in with the rest, adding 16 lbs. loaf sugar and 6 gallons of common gin. Mix all together, and fine with a little alum, dissolved in water. Colour with burnt sugar.

(3.) 2 gallons rectified spirit, 2 drachms oil of Seville orange, 1 drachm oil of carraway, 1 drachm oil of wormwood, $\frac{1}{4}$ ounce almond cake, $\frac{1}{2}$ ounce coriander seeds, 4 lbs. loaf sugar, 1 gallon water; steep together, and blend the oils as above directed.

NOYEAU.

For 5 gallons, take—

$2\frac{1}{2}$ drachms oil of Bitter almonds.

$\frac{1}{4}$ drachm oil of cassia.

$\frac{1}{4}$ drachm oil of mace.

$\frac{1}{4}$ drachm Vanilla root (steeped in a little spirit of wine).

$1\frac{1}{2}$ gallons rectified spirit.

15 lbs. loaf sugar.

$2\frac{1}{2}$ gallons water.

Mix the essential oils with a little acetic acid before adding them to the spirit. Stir in the Vanilla extract, and the syrup made by dissolving the sugar in the water.

Blend well together, and clarify with isinglass finings.

CHAPTER VII.

REDUCING TABLES.

The following reducing tables will be found very useful to the publican in making up small quantities of spirits for retail trade.

Only the strengths most required in the case of gin, whiskey, &c., are given.

17 UNDER PROOF REDUCED TO 22 UNDER PROOF.					17 UNDER PROOF REDUCED TO 30 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtms.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtms.
5	..	1	..	2	5	..	3	1	1
10	..	2	1	..	10	1	3	..	2
20	1	1	..	..	20	3	2	1	2
30	1	3	1	..	30	5	2	..	2
40	2	2	..	..	40	7	1	1	..
50	3	1	..	..	50	9	1	..	..
60	3	3	..	..	60	11	..	1	..
70	4	2	..	..	70	13	..	..	..
80	5	1	..	..	80	14	3	..	..
90	5	3	..	..	90	16	2	1	..
100	6	2	..	..	100	18	2	..	..

17 UNDER PROOF REDUCED TO 35 UNDER PROOF.					17 UNDER PROOF REDUCED TO 40 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.
5	1	1	1	..	5	1	3	1	1
10	2	3	..	..	10	3	3	..	2
20	5	2	..	..	20	7	2	1	1
30	8	1	..	2	30	11	2	..	..
40	11	..	..	..	40	15	1	..	2
50	13	3	1	..	50	19	1	..	..
60	16	2	1	..	60	23	..	..	..
70	19	2	..	..	70	26	3	..	..
80	22	..	..	..	80	30	2	1	..
90	25	..	..	..	90	34	2	..	..
100	27	3	..	..	100	38	2	..	..

PROOF REDUCED TO 5 UNDER PROOF.					PROOF REDUCED TO 10 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.
5	..	1	..	1	5	..	2	..	2
10	..	2	..	2	10	1	..	1	..
20	1	..	1	..	20	2	1	..	..
30	1	2	1	..	30	3	1	1	..
40	2	1	..	..	40	4	2	..	..
50	2	3	..	..	50	5	2	1	..
60	3	1	..	..	60	6	3	..	..
70	3	3	..	..	70	7	3	..	..
80	4	1	..	..	80	9	..	..	..
90	5	..	..	..	90	10	..	..	..
100	5	2	..	..	100	11	1	..	..

PROOF
REDUCED TO
17 UNDER PROOF.

Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.
5	1	..	..	1
10	2	..	..	2
20	4	..	1	..
30	6	1	..	..
40	8	1	..	..
50	10	1	1	..
60	12	2	..	..
70	14	2	..	..
80	16	2	..	..
90	18	2	..	..
100	20	3	..	..

PROOF
REDUCED TO
20 UNDER PROOF.

Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.
5	1	1	..	..
10	2	2	..	..
20	5	..	..	..
30	7	2	..	..
40	10	..	..	..
50	12	2	..	..
60	15	..	..	..
70	17	2	..	..
80	20	..	..	..
90	22	2	..	..
100	25	..	..	..

PROOF
REDUCED TO
22 UNDER PROOF.

Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.
5	1	1	1	1
10	2	3	..	2
20	5	2	1	..
30	8	2	..	..
40	11	1	..	..
50	14	..	1	..
60	17	..	..	..
70	19	3	..	..
80	22	2	..	..
90	25	1	..	..
100	28	1	..	..

PROOF
REDUCED TO
30 UNDER PROOF.

Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.
5	2	..	1	1
10	4	1	..	1
20	8	2	1	..
30	13	..	..	..
40	17	1	..	..
50	21	2	..	..
60	25	3	..	..
70	30	..	..	..
80	34	2	..	..
90	38	3	..	..
100	43	..	..	..

PROOF REDUCED TO 35 UNDER PROOF.					PROOF REDUCED TO 40 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtus.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtus.
5	2	2	1	2½	5	3	1	..	2
10	5	1	1	1	10	6	2	1	2
20	10	3	..	2	20	13	1	1	..
30	16	1	..	..	30	20	..	..	..
40	21	2	1	..	40	26	3	..	..
50	27	..	..	..	50	33	1	1	..
60	32	2	..	..	60	40	..	..	..
70	37	3	..	..	70	46	3	..	..
80	43	..	1	..	80	53	2	..	..
90	48	3	..	..	90	60	..	..	..
100	54	..	..	..	100	66	3	..	..
10 OVER PROOF REDUCED TO 10 UNDER PROOF.					10 OVER PROOF REDUCED TO 20 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtus.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtus.
5	1	..	..	3½	5	1	3	1	..
10	2	..	1	3	10	3	3	..	..
20	4	1	1	2	20	7	2	..	..
30	6	2	1	..	30	11	1	..	..
40	8	3	1	..	40	15	..	..	..
50	11	..	1	..	50	18	3	..	..
60	13	1	..	..	60	22	2	..	..
70	15	2	..	..	70	26	1	..	..
80	17	3	..	..	80	30	..	..	..
90	20	..	..	..	90	33	3	..	..
100	22	1	..	..	100	37	2	..	..

10 OVER PROOF REDUCED TO 30 UNDER PROOF.					20 OVER PROOF REDUCED TO 10 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.
5	2	3	..	3	5	1	2	1	$\frac{1}{2}$
10	5	2	1	2	10	3	1	..	3
20	11	1	1	..	20	6	2	1	1
30	17	..	1	..	30	10	..	..	..
40	22	3	..	..	40	13	1	1	..
50	28	2	..	..	50	16	3	1	..
60	34	1	..	..	60	20	..	..	..
70	40	..	..	..	70	23	2	..	..
80	45	2	..	..	80	26	3	..	..
90	51	2	..	..	90	30	1	..	..
100	57	..	..	..	100	33	3	..	..

20 OVER PROOF REDUCED TO 20 UNDER PROOF.					20 OVER PROOF REDUCED TO 30 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.
5	2	2	..	..	5	3	2	..	$2\frac{1}{2}$
10	5	..	..	..	10	7	..	1	1
20	10	..	..	..	20	14	1	..	..
30	15	..	..	..	30	21	2	..	..
40	20	..	..	..	40	28	2	1	..
50	25	..	..	..	50	35	3	1	..
60	30	..	..	..	60	43	..	..	..
70	35	..	..	..	70	50	..	1	..
80	40	..	..	..	80	57	1	..	..
90	45	..	..	..	90	64	2	..	..
100	50	..	..	..	100	71	3	..	..

25 OVER PROOF REDUCED TO 5 UNDER PROOF.					25 OVER PROOF REDUCED TO 10 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtms.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtms.
5	1	2	..	3	5	1	3	1	2
10	3	..	1	2	10	3	3	1	1
20	6	1	1	..	20	7	3	..	2
30	9	2	..	2	30	11	3	..	..
40	12	3	..	..	40	15	2	1	..
50	16	..	1	..	50	19	2	1	..
60	19	..	1	..	60	23	2	..	..
70	22	2	..	..	70	27	2	..	..
80	25	2	..	..	80	31	1	..	..
90	28	3	..	..	90	35	..	1	..
100	32	1	..	..	100	39	1	..	..

25 OVER PROOF REDUCED TO 22 UNDER PROOF.					25 OVER PROOF REDUCED TO 30 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtms.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtms.
5	3	..	..	1	5	3	3	1	2
10	6	..	..	2	10	7	3	1	..
20	12	..	1	..	20	15	3	..	..
30	18	..	1	..	30	23	2	1	..
40	24	1	..	..	40	31	2	..	..
50	30	1	..	..	50	39	2	1	..
60	36	1	..	..	60	47	1	..	..
70	42	2	..	..	70	55	..	..	..
80	48	2	..	..	80	63	..	..	..
90	54	2	..	..	90	71	..	..	..
100	60	2	..	..	100	79	1	..	..

30 OVER PROOF REDUCED TO 5 UNDER PROOF.					30 OVER PROOF REDUCED TO 10 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtms.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtms.
5	1	3	..	2	5	2	..	1	2
10	3	2	1	2	10	4	1	1	2
20	7	1	1	..	20	8	3	1	..
30	11	..	1	..	30	13	1	1	..
40	14	3	..	1	40	17	3	..	..
50	18	2	1	..	50	22	1	..	..
60	22	1	..	..	60	26	3	..	..
70	26	..	..	..	70	31	..	..	..
80	29	2	1	..	80	35	2	..	..
90	33	1	..	..	90	40	..	..	..
100	37	1	..	..	100	44	2	..	..

30 OVER PROOF REDUCED TO 17 UNDER PROOF.					30 OVER PROOF REDUCED TO 2 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtms.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtms.
5	2	3	..	2	5	3	1	..	2
10	5	2	1	1	10	6	2	1	1
20	11	1	..	1	20	13	1	..	1
30	17	..	..	2	30	19	3	1	..
40	22	2	1	..	40	26	2	1	..
50	28	1	1	..	50	33	1	1	..
60	34	..	1	..	60	39	3	..	..
70	39	3	1	..	70	46	2	..	..
80	45	1	..	..	80	53	1	..	..
90	51	..	1	..	90	59	3	..	..
100	56	3	..	..	100	66	3	..	..

REDUCING TABLES.

35 OVER PROOF REDUCED TO 5 UNDER PROOF.					35 OVER PROOF REDUCED TO 10 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.
5	2	..	1	..	5	2	2	..	..
10	4	1	..	..	10	5	..	..	..
20	8	2	..	..	20	10	..	..	..
30	12	2	1	..	30	15	..	..	..
40	17	..	..	..	40	20	..	..	..
50	21	1	..	..	50	25	..	..	..
60	25	1	1	..	60	30	..	..	..
70	29	2	1	..	70	35	..	..	..
80	34	..	..	..	80	40	..	..	..
90	38	1	..	..	90	45	..	..	..
100	42	2	..	..	10	50	..	..	..

35 OVER PROOF REDUCED TO 17 UNDER PROOF.					35 OVER PROOF REDUCED TO 22 UNDER PROOF.				
Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.	Spirits Galls.	Water Galls.	Water Qts.	Water Pints.	Water Qtns.
5	3	..	1	1	5	3	2	1	1
10	6	1	..	1	10	7	1	..	1
20	12	2	..	3	20	14	2	..	..
30	18	3	1	..	30	21	3	1	..
40	25	..	1	1	40	29	1	..	..
50	31	2	..	..	50	36	2	..	..
60	37	3	..	..	60	43	3	..	..
70	44	..	..	..	70	51	..	1	..
80	50	1	1	..	80	58	2	..	..
90	56	2	..	..	90	65	3	..	..
100	63	..	..	..	100	73	..	..	..

CHAPTER VIII.

BRIEF HINTS ON THE MANAGEMENT OF
SPIRITS IN GENERAL.

(1.) In reducing spirits, always use, if possible, water that has been boiled a short time and allowed to cool. Hard water of any kind contains lime, which strong spirit is apt to throw down, thus giving, when freshly added, an unpleasant milkiness to the liquor that takes generally some days to clear off or subside. Even when the reduced spirit clarifies itself by standing, the collection of lees at the bottom of the vessel prevents the whole of the contents being drawn off in a saleable condition, and also imparts a mawkish, disagreeable taste. Clear, tasteless, rain-water will answer pretty well, if boiled water cannot be conveniently obtained.

(2.) If you wish to be very precise as to

selling strengths, you must add rather more water than the quantity found by calculation; but it is better for your reputation and your interest to err on the side of a deficiency rather than an excess of water. *The hydrometer is the only safe guide in the business of reducing.* After mixing in the calculated quantity of water, try a sample with the hydrometer, and if the desired point of strength be not hit sufficiently near, put in a *little* more water, and apply the instrument again, and so on, until you satisfy yourself. A grocer might as well try to weigh raisins without a pair of scales or a balance of some kind, as a spirit merchant hope to reduce his goods properly without the aid of a correct hydrometer. Guess-work never answers in a trade requiring so much precision, and where the articles dealt in fetch so high a price.

(3.) In selecting spirits, especially rum, see that they have no marked flavour except what naturally belongs to them, likely to prove disagreeable to your customers. Rum of the more common brands is often smoky, woody, oily, &c. To give the samples a fair trial, mix a little of the spirit with warm water in a large glass. The heat brings out the aroma and

flavour, and greatly assists the judgment of the purchaser: it is also a good plan to rub a little spirit smartly between the hands, and then put the nose close in between the joined palms. Brandy is very usefully tested in this way.

(4.) Do not bung down spirits until they are ascertained to be clear. If they prove not to be bright and fine at the first running, draw a quart or two from the tap until the cloudiness disappears, which will always be the case when the foulness arises from the part of the spirit lying around the tap. To show off your goods to advantage in a perfectly open and legitimate manner, hold the glass a considerable distance from the mouth of the tap, and let the spirit run rather slowly. This expedient makes the spirit carry a better bead.

(5.) All spirit taps should be taken out and boiled in mutton suet twice a year, to remove verdigris and prevent contamination of the spirit.

(6.) Peppermint, aniseed, and indeed all cordials and liqueurs should be kept in vessels appropriated to the same kind of goods: otherwise there would be great danger of spoiling

the flavour of other spirits which through mistake might be put into one of these casks.

(7.) The great secret of obtaining mild, palatable whiskey is, as has already been observed in Chapter 5, *to blend several varieties of the same kind of spirit together*. The produce of one distillery may be too smoky, of another too harsh, of another too fainty, &c. By a judicious union of all, the faults of each will be in a great measure corrected. It is said that a little raisin or orange wine wonderfully softens and improves new whiskey, but an honest article should not require such treatment.

For a summary of the laws and regulations applicable to the trade of spirit dealers, publicans, &c., see "Loftus's Legal Handbook," price 1s.

"THE PUBLICAN'S GUIDE," price 2s. 6d.,
*contains nearly Three Hundred similar tables to
meet every possible case of reducing SPIRITS.*

W. R. LOFTUS,

MANUFACTURER OF

HYDROMETERS, SACCHAROMETERS, AND
GAUGING INSTRUMENTS

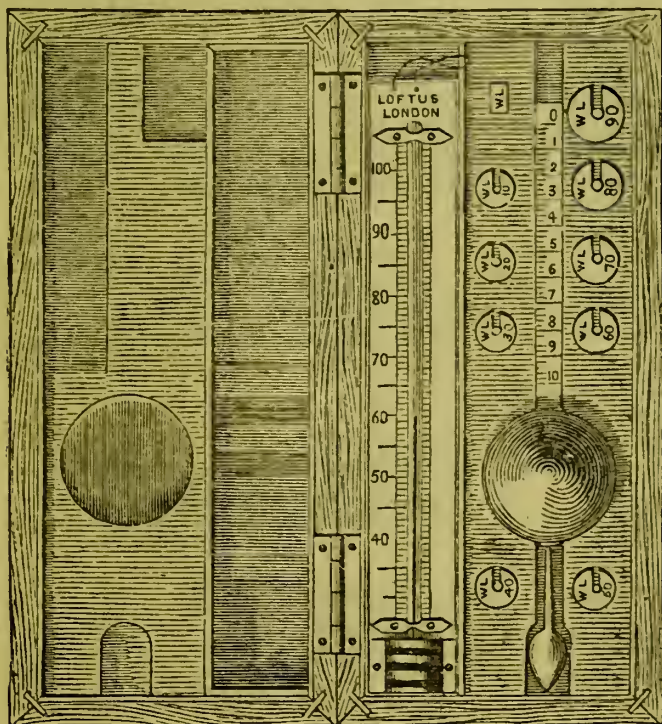
To the Inland Revenue, Customs, Admiralty, and Dominion of Canada,
146, OXFORD STREET, LONDON.

SYKES'S HYDROMETERS,

For the use of Wine and Spirit Merchants, Distillers, &c., &c.

£ s. d.

Sykes's Hydrometer, extra and best gilt, with Comparative
and Reducing Rule, Ivory Thermometer, Book of Tables,
Trial Glass, and full instructions, complete .. (1st Class) 4 10 6



Sykes's Hydrometer, without rule. Fig. 1 4 4 0

							£	s.	d.
Sykes's Hydrometer, with Book of Tables, and Trial Glass, complete	..	..	..	..	..	.. (3rd Class)	3	15	0
Ditto ditto	..	..	..	..	..	.. (4th Class)	3	0	0
Ditto ditto	..	..	..	..	..	.. (5th Class)	2	11	0

N.B.—The 1st, 2nd, and 3rd class Hydrometers are precisely those used by Distillers, and only manufactured by W. R. LOFTUS.

Top Weight Hydrometer, extra and best gilt, with Tables and Trial Glass, fitted, complete	3	3	0
Loftus's Small Pocket Sykes's Hydrometer, best double gilt, with Ivory Thermometer, Enamelled Tube, small Book of Tables, Trial Glass, complete	4	4	0
Sykes's Hydrometer for exportation, and fitted expressly for hot climates, with screwed boxes to prevent warping, and Tables calculated to 100 degrees temperature, extra to the above prices, 10s.			
Dicas's Hydrometer, best double gilt, with Rules, &c., complete	5	5	0
Glass Hydrometer, with Ivory Scale, and instructions for its use (warranted correct)	0	10	6

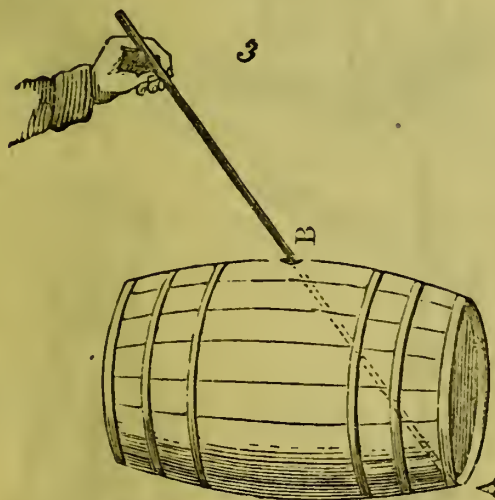
GAUGING INSTRUMENTS & RULES, &c.

Cordrometer, to show the weight per bushel of Barley, &c., in case, &c., complete	..	..	..	..	..	$\frac{1}{2}$ -pint	3	3	0
Ditto ditto	..	..	..	..	..	$\frac{1}{4}$ -pint	2	12	6
Ditto ditto	..	..	..	..	..	$\frac{1}{2}$ -pint	2	2	0
Calliper Gauging Instruments, complete, as used by H. M. Customs, with Book of Directions	..	..	..	..	..	..	3	10	0
FIG. 2.—Boxwood Two-slided Gauging, Ullaging, Valuing, and Reducing Rule, with Instructions, length 12 inches (ordinary size), post free	..	..	..	..	..	..	0	10	6
Ivory ditto ditto made of best Ivory ditto	..	..	..	..	..	..	1	5	0
Boxwood ditto ditto 24 inches in length, very open scale, suitable for Warehouses, Cellars, &c., &c.	..	..	..	..	..	..	0	14	0
Miniature Boxwood Two-slided Gauging, Ullaging, Valuing, and Reducing Scale, length 6 inches, for the pocket, post free	..	..	..	..	..	..	0	7	6
Ditto Ivory ditto ditto post free	..	..	..	..	..	..	0	15	6
Excise Vacuity Slide Rule	..	..	..	..	..	..	0	13	0
Loftus's New Reducing and Comparative Rule, with full In- structions, showing the quantity of water requisite to reduce spirits to any required strength, and its compara- tive value when so reduced, 9-inch, boxwood, sent post free	..	..	..	..	..	..	0	4	6
Ditto ditto Ivory, best make, post free	..	..	..	..	..	..	0	10	6
Boxwood ditto 12 inches length	..	..	..	..	..	..	0	5	6
Ditto ditto 24 inches length	..	..	..	..	..	..	0	8	0

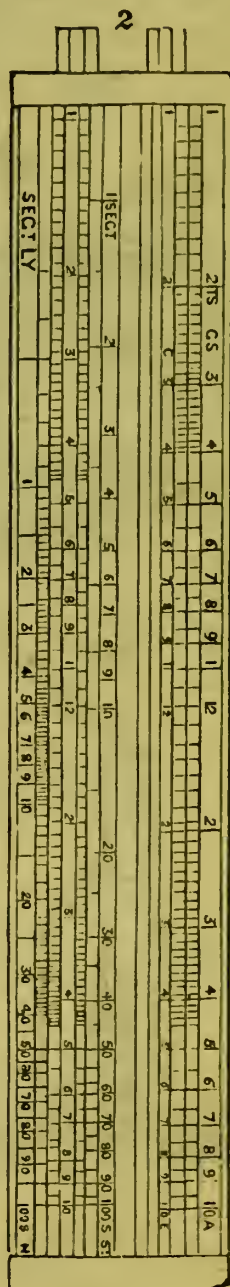
Fig. 3.—Loftus's New Dipping Rod, with line of inches and tenths and diagonal; will show the quantity in any cask, both lying and standing, and will also show the full contents of the cask, with Instructions	0	6	6
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	£	s	d.
The same Rod, but in six folding joints	0	7	6
5 feet, six-jointed Wine and Spirit Dip Rule	0	7	6
Small Miniature ditto, 36 inches length	0	7	6
Jointed Pin Dips, for Firkins, Kilderkins, and Barrels, lying or standing, with inches and tenths	0	4	6

This Rule will show the Ullage in any regular made Cask, let it be either Lying or Standing. Example—Suppose a Barrel or 36-gallon Cask is present on Ullage, and that it is Standing, or St.; seek for such on the Rule, viz., Barrel 36-galls. St.; dip the Cask perpendicularly, and the wet inches on *that line* will be the number of Gallons therein. Should the Cask be Lying, or S. Ly., seek for such, viz., Barrel 36-galls., S. Ly.; the wet will also indicate the content, or ullage. Whatever be the full content of the Cask, a similar result will be found, by looking on that part of the Rule where such is denoted, observing that each size Cask has two scales, or lines, viz. for S. Ly. and St.



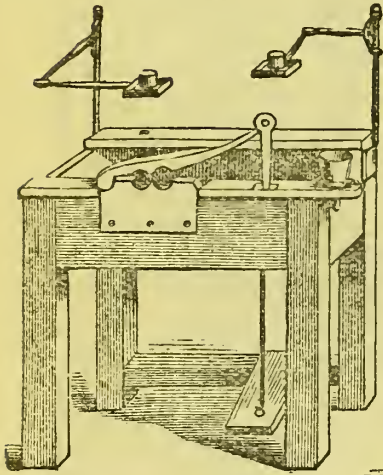
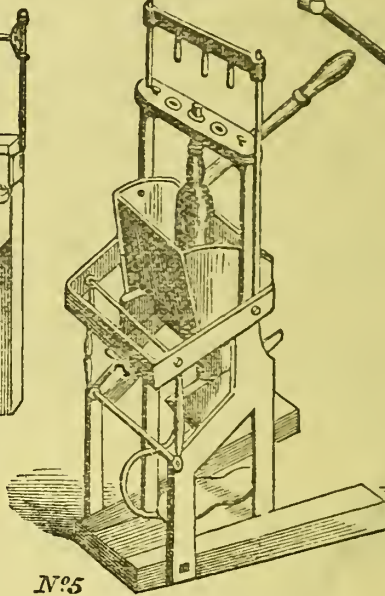
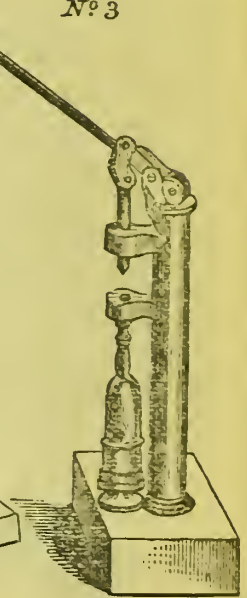
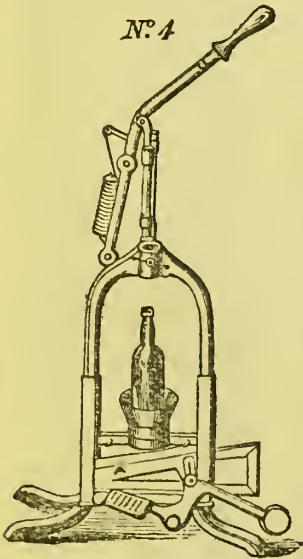
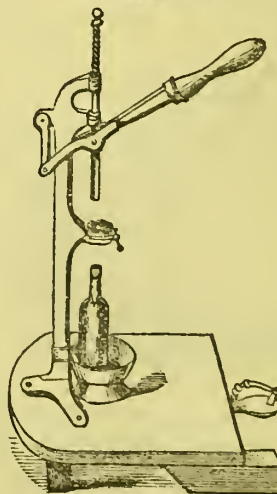
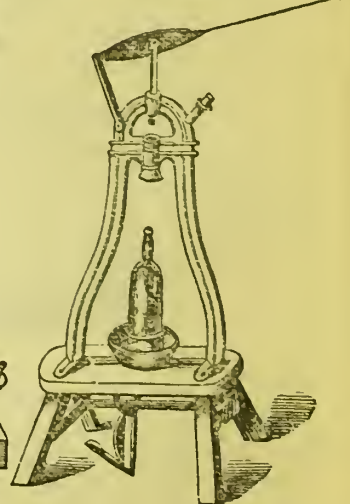
To find the full content of a Cask when such is not marked thereon, or known,—with that part of the Rule marked “Imperial Gallons,” dip the Cask as in the engraving, and the mark at B is the number of gallons it will contain when full.



CORKING MACHINES.

PRICES.

		£	s.	d
No. 1.	With wrought-iron gripe and jointed candlesticks	..	2	5 0
" "	" cast-iron gripe and tin candlesticks	..	1	12 0
" "	" ditto ditto	..	1	5 0
	Boot and Driver, extra	..	0	8 6

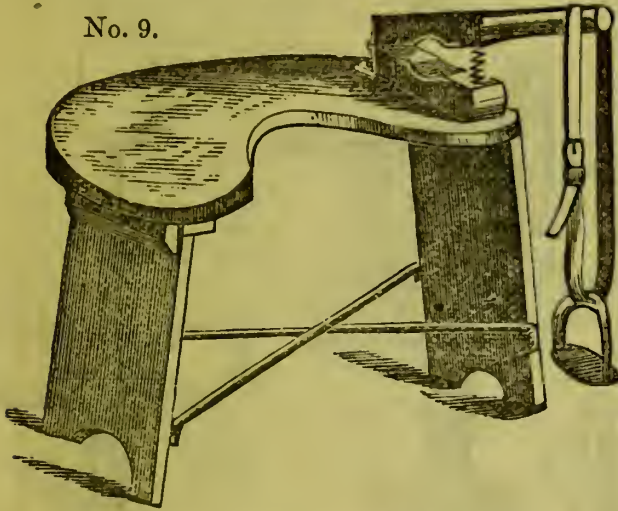
N^o 1N^o 2N^o 3N^o 4N^o 5N^o 6

No. 2.	Masterman's Patent	..	3	10 0
" "	ditto with improved spring lever	..	4	5 0

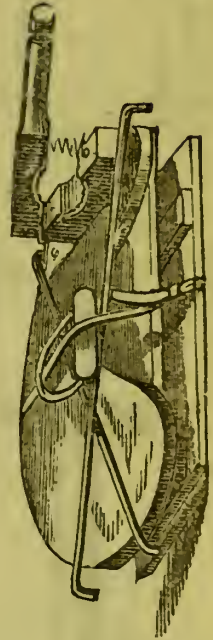
CORKING MACHINES—*Continued.*

			£	s.	d.
No. 3.	With self-acting support for bottle	.. ..	4	5	0
No. 4.	With double action spring lever (a very useful machine)	.. ..	2	10	0
No. 5.	With single-action lever	.. ..	1	15	0
No. 6.	The cheapest form of Lever Machine	.. ..	1	5	0
No. 9.	Portable Corking Machine	.. ..	0	15	0

No. 9.



The same folded up.



Cork Drivers. 1s., 1s. 6d., 1s. 9d. each.



PACKING AND SAMPLING TOOLS.

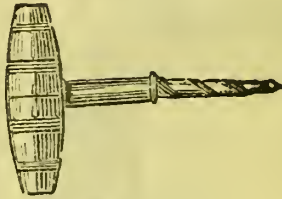
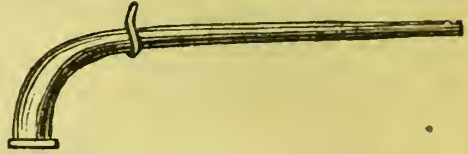
FRETS FOR SAMPLING CASKS.

With Wood Handle, With Wood Handle,
2s. Extra large for Spile Tap, With Brass
2s. 6d. Handle. 3s.

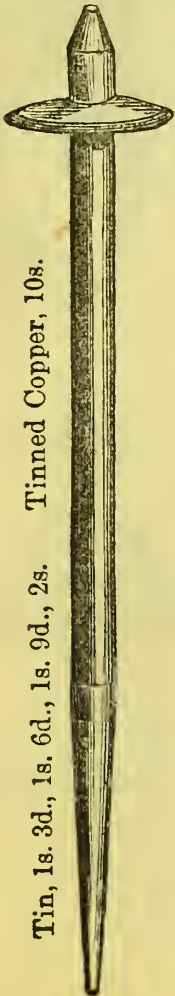


PACKING AND SAMPLING TOOLS—*Continued.*

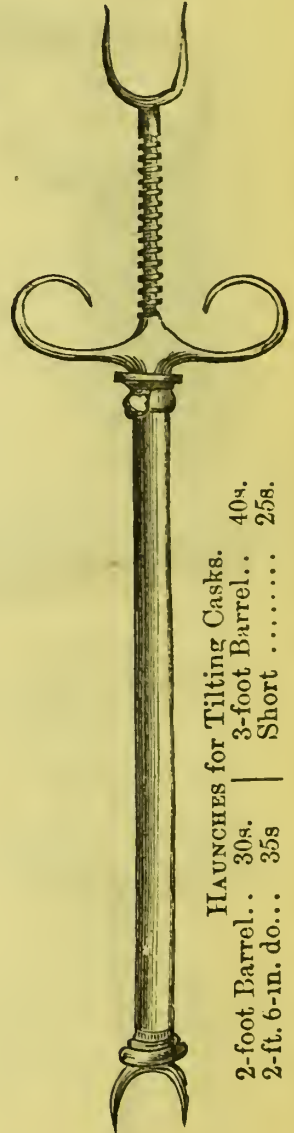
SILVER TASTING TUBE, 10s. 6d.

With Fancy Wood
Handle, 2s. 6d.VELINCHERS FOR SAMPLING
CASKS.Ebonite,
10s. 6 l.

Glass, 4s.



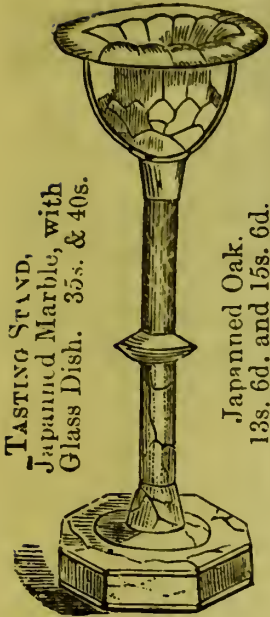
Tin, 1s. 3d., 1s. 6d., 1s. 9d., 2s. Tinned Copper, 10s.

Pewter,
7s. 6d.

HAUNCHES for Tilting Casks.

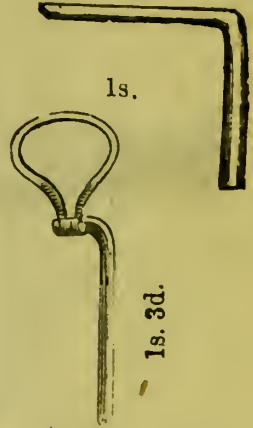
2-foot Barrel..	30s.	40s.
2-ft. 6-in. do...	35s	25s.
		Short

PACKING AND SAMPLING TOOLS--Continued.



JAPANNED GLASS TUB
For three glasses, 12s. 6d.
" four " 13s. 6d.
" six " 18s.

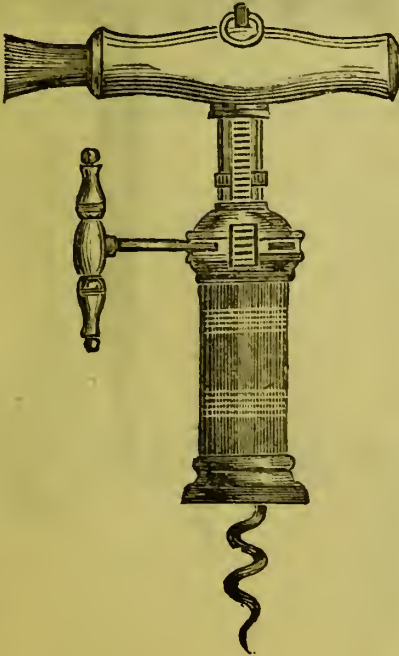
NEEDLES for



Bottling Claret.

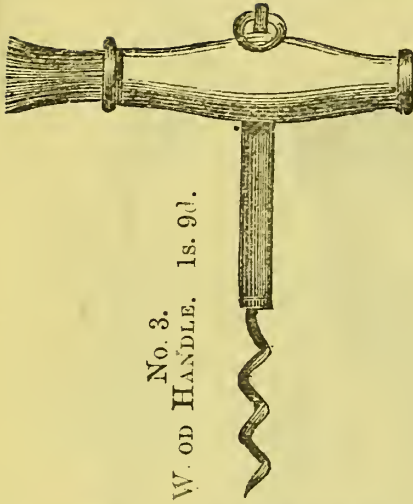
CORKSCREWS.

No. 1. Rack Movement, Wood Handle. 7s. 6d.

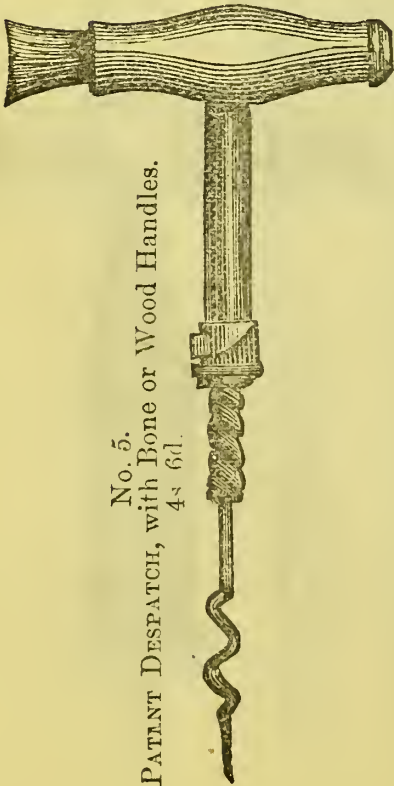


No. 2. Double action, with Bone Handle. Quarts, 4s. Pins, 3s. 6d.

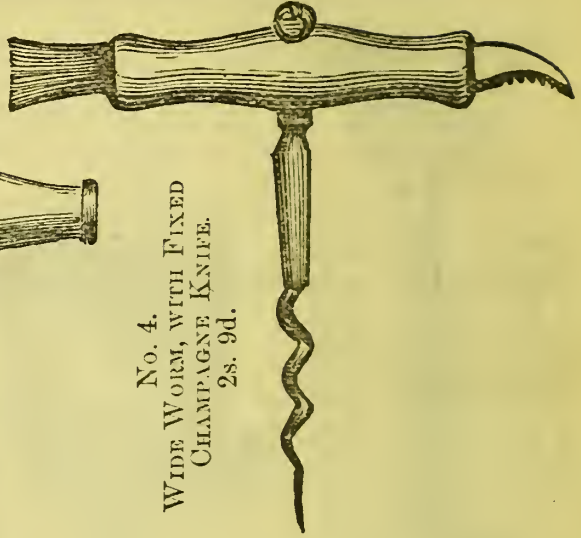


CORKSCREWS—*Continued.*

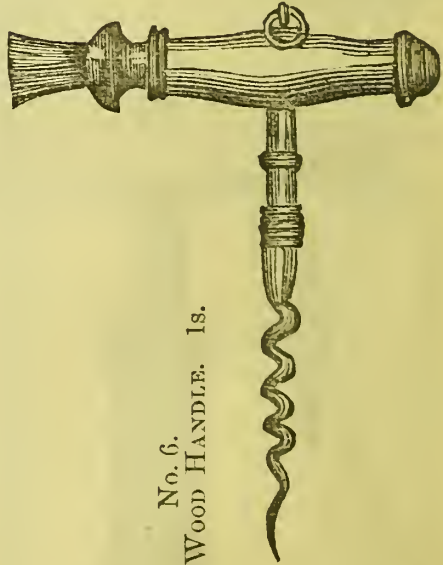
No. 3.
WOOD HANDLE. 1s. 9d.



No. 5.
PATENT DESPATCH, with Bone or Wood Handles.
4s. 6d.



No. 4.
WIDE WORM, WITH FIXED
CHAMPAGNE KNIFE.
2s. 9d.



No. 6.
With Wood HANDLE. 1s.

CORKSCREWS—*Continued.*

No. 7.



2s. 6d.



2s. 9d.



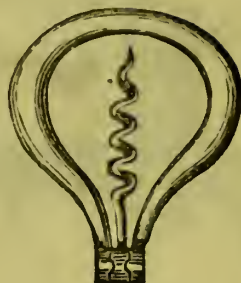
3s.



3s. 3d.



No. 8.



1s. 9d.

BOTTLING TAPS,

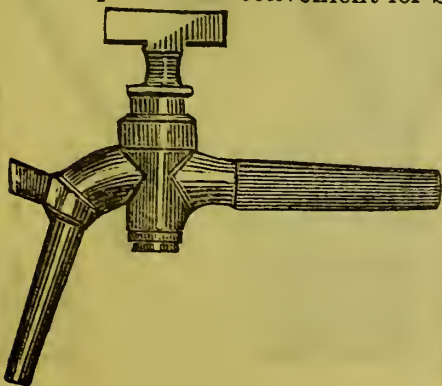
BRASS OR PLATED.

Made of Metal, the durability of which has been tested by experience. Finished with great care, and proved to bear a pressure of 200 lbs. to the inch.

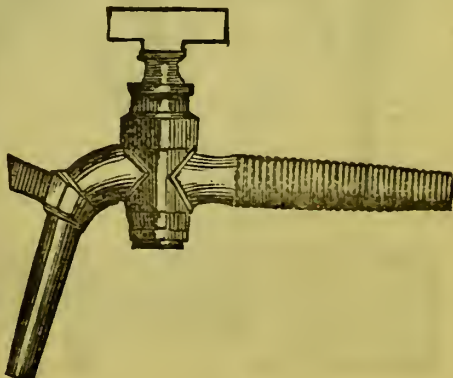
The plated are so thoroughly coated inside and outside with pure silver, that they may be left in the cask a long time without affecting the wine.

The quart size is that generally used by the trade.

The pint size is convenient for Sherry in quarter casks.



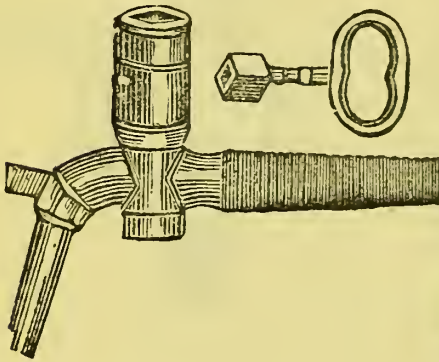
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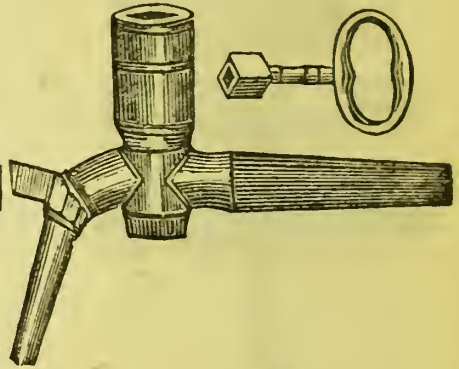
No. 2.

BOTTLING TAPS—*Continued.*

- | | |
|--|---|
| No. 1, Quart, to drive, Brass 4s. 6d.
Plated, 7s. | No. 2, Quart, to screw, Brass, 5s.
Plated, 7s. 6d. |
| No. 1, Pint, to drive, Brass, 3s. 6d.
Plated, 5s. 6d. | No. 2, Pint, to screw, Brass, 4s.
Plated, 6s. |



No. 3.

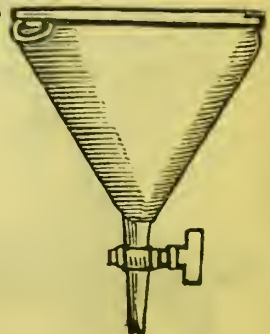
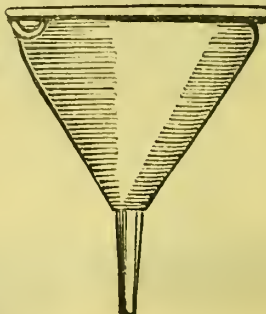
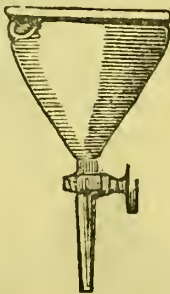


No. 4.

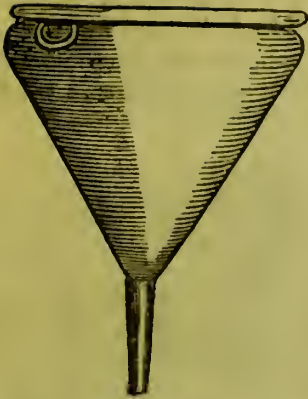
- | | |
|---|--|
| No. 3, Quart, Lock, to drive, Brass,
5s. 6d. Plated, 8s. 6d. | No. 4, Quart, Lock, to screw, Brass,
6s. Plated, 9s. |
| No. 3, Pint, Lock, to drive, Brass,
4s. 6d. Plated, 7s. | No. 4, Pint, Lock, to screw, Brass,
5s. Plated, 7s. 6d. |

COPPER FUNNELS.

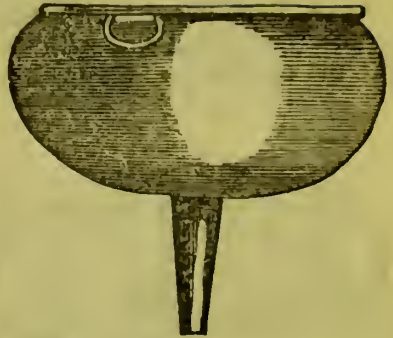
- | | | | |
|---------------------------|--|----------------------------|--|
| Pint Bottling,
5s. 6d. | Pint Bottling,
with Tap,
8s. 6d. | Quart Bottling,
6s. 6d. | Quart Bottling, with
Tap, 9s. 6d.
Strainer Extra,
1s. 6d. |
| | Strainer 1s. 6d. Extra. | | |



- | | |
|------------------------------------|-----------------------------|
| Half Gallon 9s. 6d. | Two Gallon 12s. 6d. |
| Ditto with Tap 13s. 6d. | Three Gallon 15s. 6d. |
| Ditto with Tap & Strainer 15s. 0d. | Four Gallon 22s. 0d. |
| One Gallon 10s. 6d. | Five Gallon 24s. 0d. |
| Ditto with Tap 18s. 6d. | |

COPPER FUNNELS—*Continued.*

BOWL SHAPE. 15 $\frac{1}{2}$.
 8 inch.. .. 20 $\frac{1}{2}$.
 9 inch.. .. 25 $\frac{1}{2}$.
 10 inch.. ..



COPPER SPIRIT MEASURES.

EXTRA STRONG. TOWN MADE. STAMPED IMPERIAL.

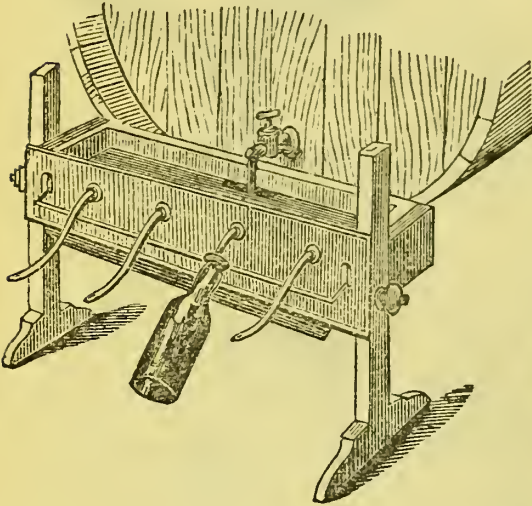
PRICES.				£ s. d.		
Copper Imperial Measure, for	Wine and Spirits	..	5-gallon	2	5	0
Ditto ditto	ditto ..	..	4-gallon	1	18	0
Ditto ditto	ditto ..	..	3-gallon	1	10	0
Ditto ditto	ditto ..	..	2 gallon	1	3	0
Ditto ditto	ditto ..	..	1-gallon	0	16	0
Ditto ditto	ditto ..	..	2-quarts	0	11	6
Ditto ditto	ditto ..	..	1-quart	0	9	0
Ditto ditto	ditto ..	..	1-pint	0	8	0
Ditto ditto	ditto ..	..	½-pint	0	7	0
Ditto ditto	ditto ..	..	1-gill	0	6	0
Ditto ditto	ditto ..	..	½-gill	0	4	6



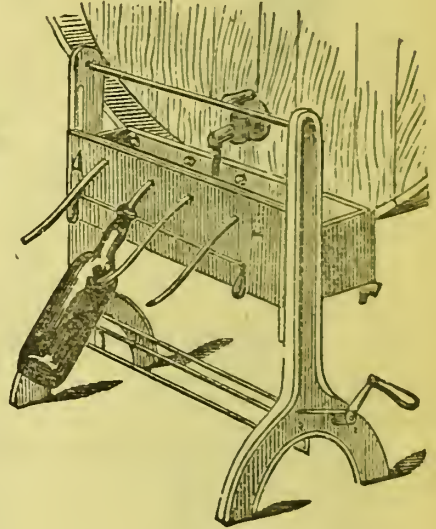
PATENT BOTTLING APPARATUS.

These Machines act by means of a trough which is kept filled to a certain level by a tap with float and valve, whence the liquor flows into the bottles through syphons, with so gentle a stream that no froth

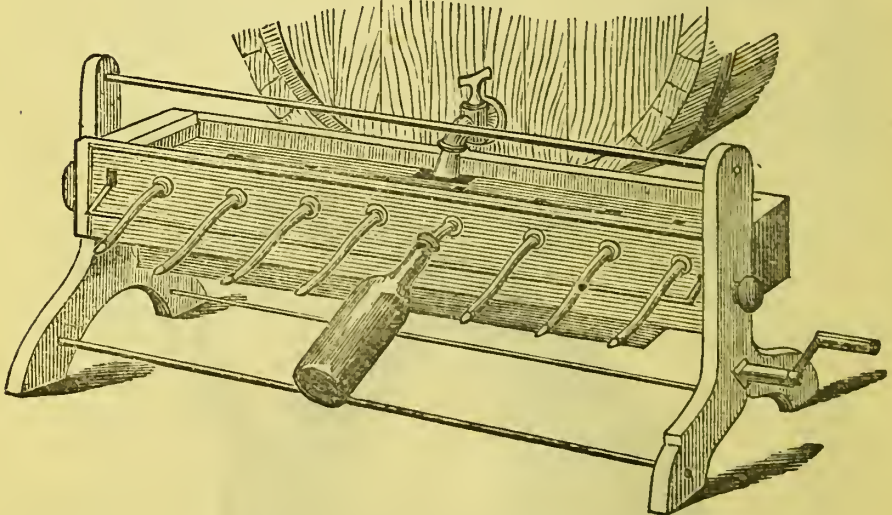
No 1



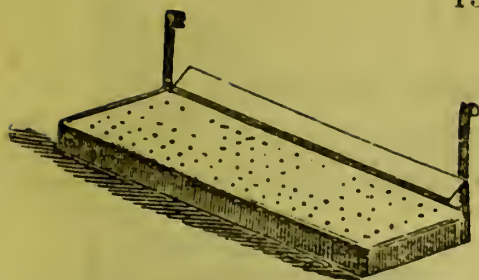
No 2



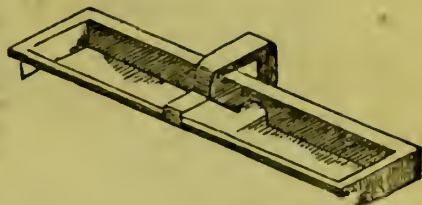
No 2a



is caused; all the bottles are filling at the same time, and fill so precisely to the point required, that they may be corked without being even looked at; a great saving of time is thus effected, and all waste is avoided. Forty dozen per hour may be bottled with these Machines.



DRAINER.

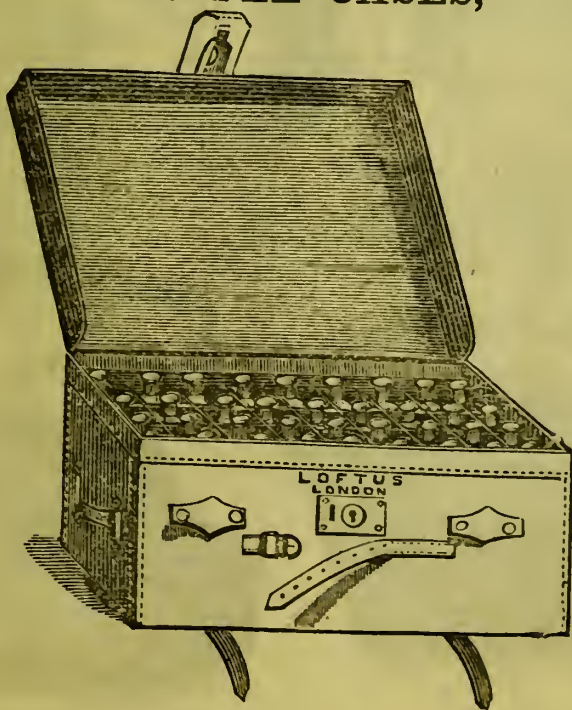


COVER.

PATENT BOTTLING APPARATUS.		4 SYPHON MACHINE.	6 SYPHON MACHINE.	8 SYPHON MACHINE.
No. 1, with wood frame and legs	£ s. d.	3 10 0	5 5 0	7 7 0
No. 2, improved, with iron legs, rack movement to raise trough, &c. . .	£ s. d.	4 10 0	6 6 0	8 8 0
These prices include the Machine itself, 1 tap, valve, float and nozzle.				
Extra Set of Syphons, for pints	£ s. d.	0 10 0	0 15 0	1 0 0
Extra Tap	£ s. d.	0 6 0	0 8 0	0 8 0
Glass Cover with metal frame for trough	£ s. d.	0 7 6	0 10 0	0 15 0
Drainer with Hanging Bars, for front	£ s. d.	0 10 0	0 15 0	1 0 0

If with Trough, Tap, and Syphons Electro-plated, extra 25s.

SAMPLE CASES,

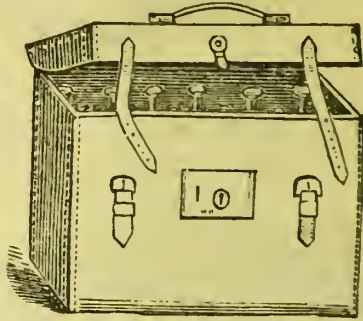


IN SOLID LEATHER AND WITH GOOD LOCKS.

SAMPLE CASES—*Continued.*

All Manufactured on the Premises, and of the Best Materials. The following are the usual sizes, kept fitted with No. 1 green glass bottles with patent stoppers, but they are made to order of any size or for any pattern bottle.

		£	s.	d.
3 bottles ..	..	0	15	0
4 do. ..	..	0	17	0
6 do. ..	..	1	0	0
12 do. ..	..	1	6	0
18 do. ..	..	1	15	0
24 do. ..	..	2	4	0
33 do. ..	..	3	0	0
including No. 1 bottles.				

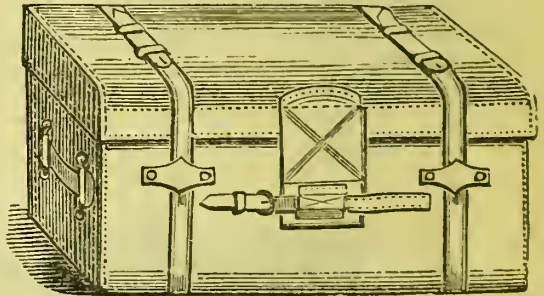


The above, fitted for Pint Dock Samples.

		£	s.	d.
12 bottles ..	..	2	15	0
24 do. ..	..	3	10	0
without bottles.				

They are also made in
AMERICAN CLOTH.

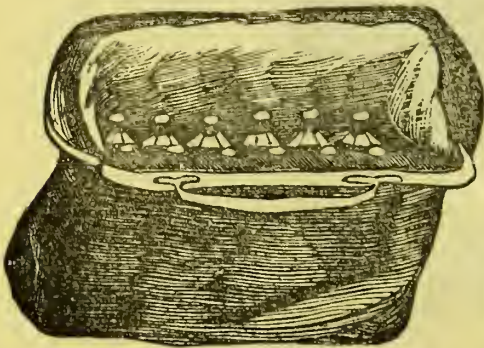
		£	s.	d.
6 bottles ..	..	0	12	6
12 do. ..	..	0	16	6

BEST ENAMELLED LEATHER
BAGS.

6 bottles	£1 5s.	} including No. 1 bottles.
12 do.	£1 10s.	
Or for 4 Pint Dock Samples £1 15s.		

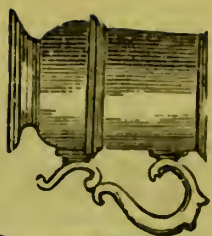
BEST MOROCCO LEATHER COURIER
BAGS.

6 bottles	£1 1s.	} including No. 1 bottles.
8 do.	£1 2s.	



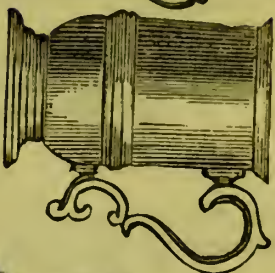
PARLOUR POTS. TOWN MADE.

Half Pint.



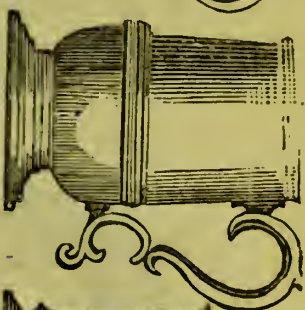
22s.

Pint.



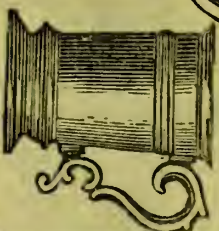
31s.

Quart.



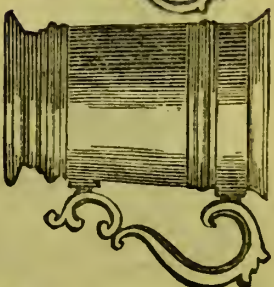
42s.

Half Pint.



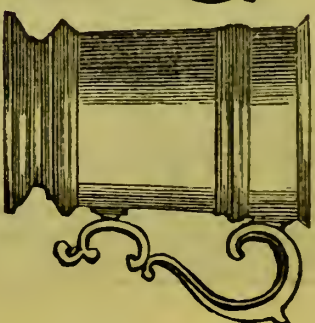
22s.

Pint.



31s.

Quart.



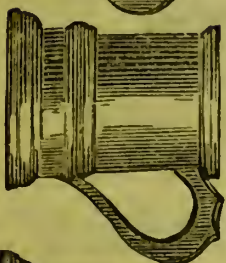
42s. per doz.

PEWTER POTS. STAMPED IMPERIAL.

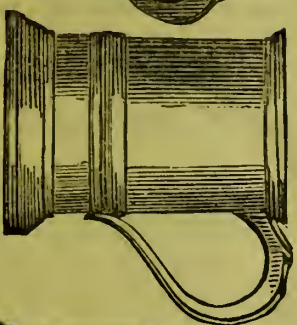
WITH BRASS RIM FOR MEASURING.
Half Pint. Pint. Quart.



14s.



21s.



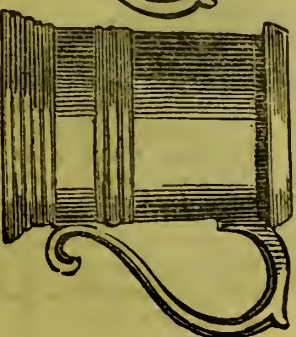
30s. per doz.



3s. 2d.



4s. 2d.



5s. 2d. each.

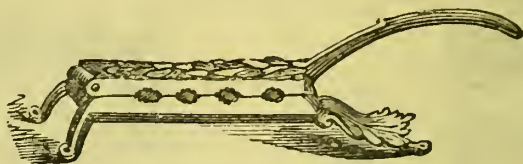
HAND CORK GRIPES.

CAST-IRON.

Japanned... 1s. 6d., 2s. 3d., 3s. 0d.
Bronzed... 2s. 0d., 2s. 9d., 3s. 6d.

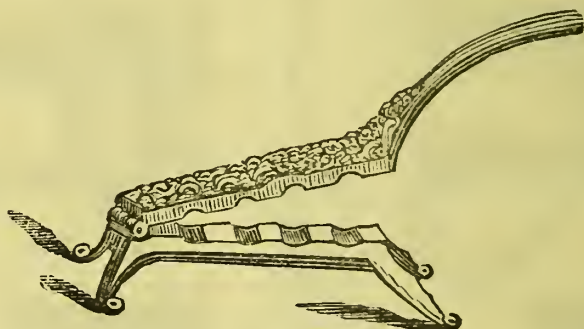
MALLEABLE.

Japanned... 2s. 6d., 3s. 3d., 4s. 0d.
Bronzed... 3s. 0d., 3s. 9d., 4s. 6d.



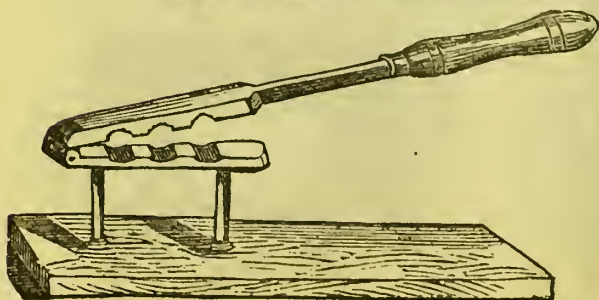
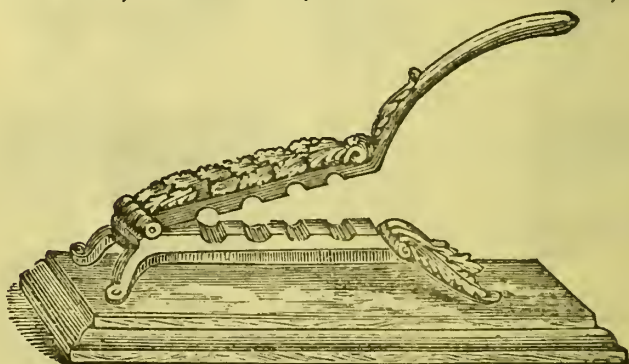
WITH SPRINGS.

Cast-iron, Jap. 2s. 0d., 2s. 9d., 3s. 3d. | Malleable, Jap. 3s. 0d., 3s. 9d., 4s. 6d.
Do. Bronzed 2s. 6d., 3s. 3d., 3s. 9d. | Do. Bronzed 3s. 6d., 4s. 3d., 4s. 9d.



ANY OF THE ABOVE.

On Plain Oak Block, extra 1s. 3d. | On Polished Oak Block, extra 1s. 9d.



BRIGHT WROUGHT IRON,
WITH SPRING, AND ON
STAND.

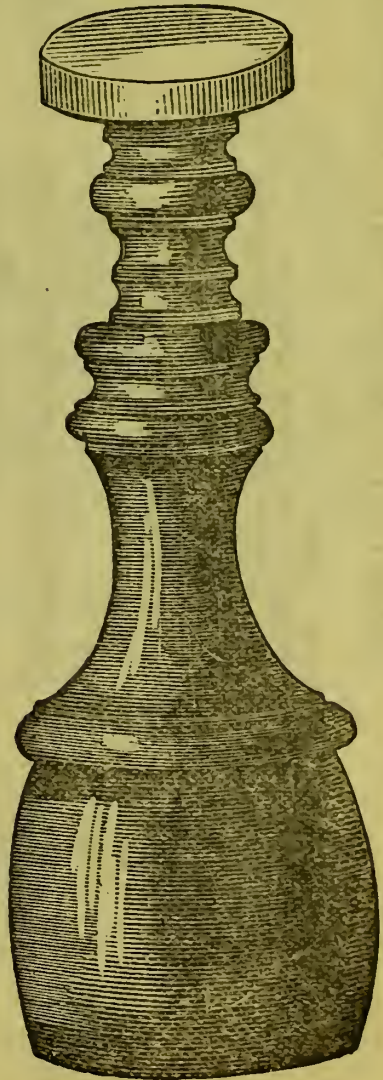
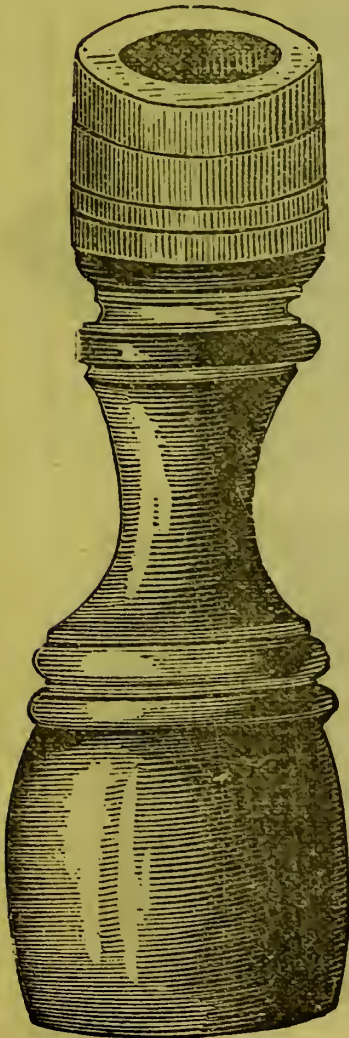
For 2 sizes of Corks 10s. 6d.
Ditto, for 3 ditto ... 12s. 0d.
Ditto, for 4 ditto ... 13s. 6d.

BRIGHT MALLEABLE, DO.

For 2 sizes of Corks 6s. 6d.
Ditto, for 3 ditto ... 7s. 6d.
Ditto, for 4 ditto ... 8s. 6d.

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A STYLE SUPERIOR TO THOSE USUALLY SOLD.



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Stock for One Gallon Bottles, plain	..	4s.	Ferrule Seal for One Gallon Bottles, plain	..	2s.	6d.
Stock for Two Gallon Bottles, plain	..	4s.	Ferrule Seal for Two Gallon Bottles, plain	..	3s.	6d.
Letters on ditto..	3d.	each.

Moveable Centres for Port, Rum, &c. &c., 2s. each.

SEALING WAX FOR BOTTLES.

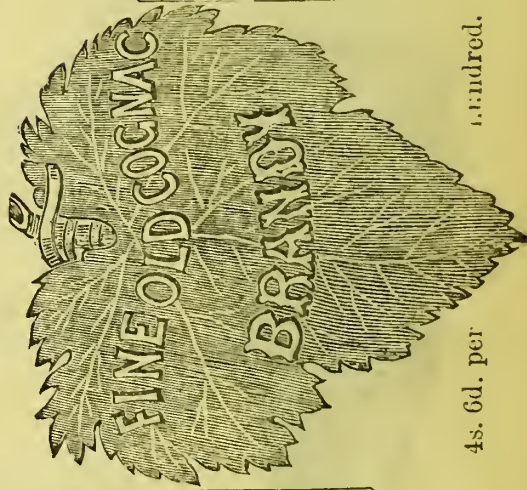
	Per lb.	Per cwt.
Red, Green, Yellow, and Brown	0s. 4d.	28s. 0d.
FINE—Black, Red, Green, Yellow, Brown, and Blue	0s. 5d.	37s. 4d.
SUPERFINE—Black, Red, Green, Yellow, Brown, Blue, and White	0s. 7d.	56s. 0d.
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FANCY—Orange, Pink, Light Blue, Pea Green, and Maroon	1s. 0d.	
Ditto—Gold Spangled	1s. 6d.	
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3s 6d. per hundred.

7s. 6d. per hundred



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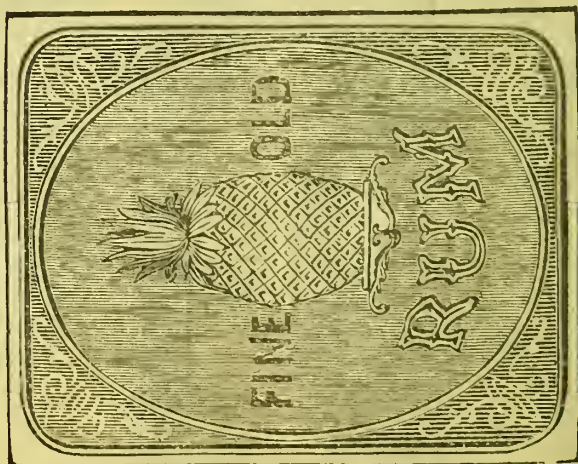
IRISH WHISKY

2s. 6d. per hundred.

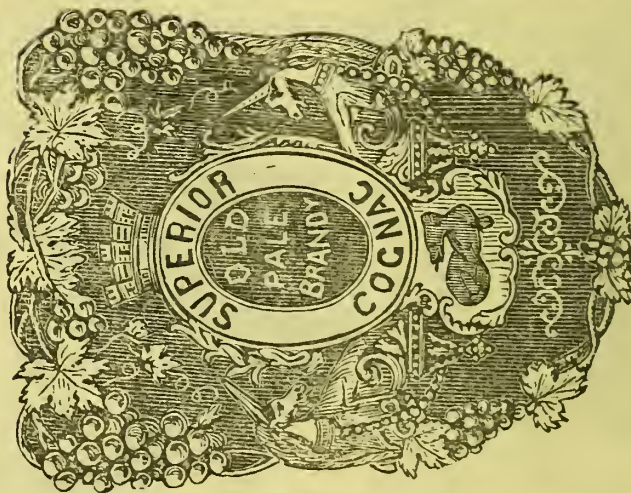
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